

## SIGNATURE PAGE

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LPC# 0310000000 Cook County  
Lake Calumet Smelting Company - Chicago  
ILN 000 509 228  
SF/HRS



# CERCLA Site Inspection



Prepared by:  
Office of Site Evaluation  
Division of Remediation Management  
Bureau of Land



**SITE INSPECTION REPORT**

**for:**

**LAKE CALUMET SMELTING COMPANY  
CHICAGO, ILLINOIS**

**ILN 000509228**

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**PREPARED BY:  
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
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**FEBRUARY 19, 2010**

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## **1.0 INTRODUCTION**

### **INTRODUCTION**

On September 30, 2007, the Illinois Environmental Protection Agency's (IEPA) Office of Site Evaluation (OSE) was tasked by the U.S. Environmental Protection Agency (U.S.EPA) Region V to conduct a Site Inspection (SI) of the former Lake Calumet Smelting Company (ILN000509228) facility located at 11901 S. Champlain Ave. in Cook County, Chicago, Illinois, Latitude 41.678, Longitude -87.606.

The primary objective of a Site Inspection is to gather necessary information needed to evaluate the extent that a site presents a threat to human health and/or the environment. This is collecting and analyzing wastes and environmental media samples to determine whether hazardous substances are present at the site and are migrating to the surrounding environment. At the conclusion of the Site Inspection, a determination will be made whether the site qualifies for additional evaluation under Superfund or should be dropped from further Superfund consideration. Additionally, the Site Inspection supports removal and enforcement actions and collects data to support further Superfund or other response actions.

The Site Inspection is not intended to be a detailed evaluation of contamination or risk assessment. If the evaluation of the site indicates that the site qualifies for additional Superfund evaluation, an Expanded Site Inspection may be conducted. In some cases an Expanded Site Inspection will be conducted to address critical hypotheses or assumptions that were not completely supported during the SI. The SI is performed under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA), commonly known as Superfund.

Lake Calumet Smelting Company was initially investigated by the IEPA in response to a

U.S.EPA Region V request to investigate former lead smelting businesses within the City of Chicago. IEPA personnel conducted a Pre-CERCLIS Screening Assessment (PCS) of this site on August 10, 2004. The PCS Assessment recommended that the former Lake Calumet Smelting Company site be further investigated. As a result of this recommendation, Lake Calumet Smelting Company was placed on the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) list in October 2004 as a site discovery. The site was placed on CERCLIS in response to concerns that past site activities may have resulted in releases of heavy metals onto the ground around the facility, and thereby entering the environment. The substances had the potential to enter the environment through four environmental pathways; groundwater, surface water, soil exposure, and air releases potentially endangering the life and health of human populations, wildlife and the environment. The potential for contamination exists, both, onsite and at nearby off-site locations. This potential stems from the following factors: the company operated from the mid 1940's to the mid or late 1960's as a zinc smelter and smelter of secondary lead, tin, babbitt, and solder; the quantity of waste is unknown; unknown waste disposal practices; and residential areas are within one-half mile (2640 feet) of the subject property (see Appendix A - 4 Mile Radius Map).

A Preliminary Assessment (PA) was conducted April 25, 2006 to collect information sufficient to support a decision regarding the need for further action under CERCLA. The assessment investigated and discussed the type of site, operational history, the four environmental pathways (groundwater migration, surface water migration, soil exposure and air migration), and the environmental hazards associated with the site. As a result of the presence of hazardous substances found within surficial soil on site property during the PA, potentially leading to contamination of humans and/or the environment, a Site Inspection was recommended. On March 26, 2008 a work plan and a site safety plan were submitted to



U.S.EPA for review and approval. These documents were subsequently approved prior to the April 21 – 24, 2008 Site Inspection sampling event.

## **2.0 SITE BACKGROUND**

### **2.1 SITE DESCRIPTION**

On April 21 - 24, 2008 personnel from the IEPA OSE conducted a Site Inspection of the former Lake Calumet Smelting Company facility located in Chicago, Illinois. Lake Calumet Smelting Company is an inactive, abandoned metal producing operation located at 11901 S. Champlain Ave., Chicago, Illinois, Township 37 North, Range 14 East, Section 22, Latitude 41.678, Longitude -87.606, in Hyde Park Township, Cook County (see Figures 1 & 2). The former Lake Calumet Smelting Company was located at the southern end of the City of Chicago, approximately 3000 feet south of E. 115<sup>th</sup> Street. Interstate 94 is visible approximately 1500 feet east of the facility.

The subject property is situated in an urban/industrial setting within the City of Chicago. Bordering the property on the north is 119<sup>th</sup> Street (unpaved and currently not in use as a street), beyond which is an open mowed grass field that is part of the Sherwin-Williams Paint Co. property; on the east is bare, filled, open property that is a portion of a storage tank container company, beyond which is I-94; on the south is bare, filled, open property that is another portion of the storage tank container company; and to the west is S. Champlain Ave. (unpaved and currently not used as a street), beyond which are railroad siding tracks and an unknown manufacturing company (Figure 3). Information obtained from the Cook County Assessors Office indicates that the facility's former structure, driveway and parking areas occupy a rectangular shaped property on approximately 5.7 acres of land. According to a 1936 – 1950 Sanborn Fire Insurance Map (Appendix B), the former facility consisted of a two story main building with two one story rooms attached to the south and a one level storage room attached to the west. What appears to be a separate, small smelting building containing a vat was located



south and adjacent to the storage room. At some point between the late 1950's to late 1960's, Lake Calumet Smelting ceased doing business. Based on United States Geological Survey (USGS) aerial photography from 1998 and 2002 and observations of IEPA personnel during the August 10, 2004 PCS Assessment, and April 25, 2006 site reconnaissance portion of the PA, all that remains of the former structures is a portion of a smoke stack. All other structures have been razed.

Currently, the site consists of a large concrete building foundation and floor with the remains of a smoke stack still present. It also appears that the demolished remains of cinder block, brick, and wood structures are present on the northwest quarter of the foundation and floor. No other former facility structures are present or visible. Chainlink fencing topped with barbed wire surrounds the former facility. Also present around the perimeter of the facility are young to mature trees, overgrown brush and weeds, all growing in gravel, cinder and dirt fill. Surrounding property on the east, south and west appears to be filled to a level which is higher in elevation than the former Lake Calumet Smelting property. The property to the north appears to be level with, or slightly lower in elevation than, the former Lake Calumet Smelting property.

The terrain of the property is flat with partially to heavily vegetated areas in the southeast corner, and in the extreme northwest quarter of the facility, respectively. Vegetated areas consist of various types and sizes of grasses, weeds, and trees consistent with the vegetation along the perimeter of the facility. Grass and weeds associated with the vegetated areas are sparse. Tree and brush growth is fairly dense.

The former Lake Calumet Smelting Company property is situated in a light to medium industrial area approximately one half mile east of the nearest residential neighborhood. No residential dwellings, schools or daycare facilities are within two hundred feet of the property. Within four miles of the property, land use consists primarily of residential and

manufacturing/light to medium industrial with some commercial/retail also scattered throughout. Seven grade schools are within one mile (5280 feet) of the property. All schools are located north, northwest, west, and southwest of the property at a distance between one-half mile (2640 feet) and one mile.

The property can be accessed by vehicle from the south through a gate in the south fence. Access by pedestrian traffic can be gained from the south through the gate, through an area of fence at the southwest corner of the property that has been crushed by falling tree limbs, and through a cut in the fence approximately twenty feet north of the southwest corner. Fencing is present around the entire perimeter of the property. However, breaches in the fence, other than the ones already noted, may not have been observed during the site reconnaissance.

The surface water runoff route for this property consists of runoff flowing into low areas on the property and ponding, or flowing toward the north side of the property where there appears to be a low area immediately off-site. The low area appears to hold moisture most of the time due to the existence of a heavy growth of Phragmites. Runoff from this location appears to trend toward the east (Lake Calumet), however a definitive route could not be determined. No city street storm drains, curb storm drains, or area drains could be found near the facility. Moisture ponding on-site either percolates into the soil or evaporates.

## 2.2 SITE HISTORY

An investigation conducted at the State of Illinois Archives in Springfield, revealed no information on the company. There was no information identifying incorporation or dissolution dates of the company. The Cook County Clerks office did not have any record of Lake Calumet Smelting Company. A property search conducted by Mid America Title Company indicates that prior to 1894 the property was owned by the Pullman Land Association, with no land use noted



for that time period. From 1894 to 1948 the property was owned by Illinois Terra Cotta Lumber Company. From 1948 to the early 1970's the property was owned by the Lake Calumet Smelting Company. In the early 1970's the property was purchased by the Lake Calumet Building Corporation which leased the property to Inland Metals Refining Company until 1989. Both Inland Metal Refining Company and Lake Calumet Building Corporation went bankrupt in October 1989. The current property owner is listed as Adolph Garcia Gonzalez of Chicago. The last tax payer listed is Francisco Garcia of Orland Park, Illinois. However, according to the Cook County Treasurer's Office, Cook County Property Tax & Payment Information, Chicago, Illinois, lists mailing information for taxes, since 1993, as Lake Calumet Building Corporation at 11901 Champlain Ave. This corporation does not currently exist. The Treasurer's records also indicate delinquent property taxes for Property Index Number (PIN) 25-22-401-002-0000 (11901 Champlain Ave) back to 1988 (which is the farthest back records at the office exist).

A search of Sanborn Fire Insurance Maps (Appendix B), located at the Illinois State Library, indicated that the land bordered by unpaved 119<sup>th</sup> St. on the north, unpaved S. Champlain Ave. (formerly Stephenson Ave., until about 1940) on the west, a small boat turn-around area east (excavated to connect to Lake Calumet), and open ground on the south was originally the site of the Illinois Terra Cotta Lumber Company. A Sanborn Map from 1897 indicates that the company had structures constructed over approximately 2.5 to 3 acres of the 5.7 acres delineated above. Structures included an office, eleven kilns, drying rooms, mechanical shop, engine room, and others. Also on the property was a storage yard for lumber and a storage structure for saw dust. No other information was found to indicate when this company began operating at this location. In 1948 Illinois Terra Cotta Lumber Company ceased business and some of the site structures were either razed or altered during establishment of Lake Calumet Smelting Company. Sanborn Fire Insurance Maps spanning a time period from 1936 –



1950 indicate Lake Calumet Smelting was in existence. However, the Metal Industry Directory, Standard Metal Directory 1940 Edition has no listing for Lake Calumet Smelting. Also, an aerial photograph taken in 1939/1940 (Figure 4) indicates Illinois Terra Cotta Lumber Company was still occupying the property. This information verifies that Lake Calumet Smelting Company was established between 1940 and 1950. In addition, according to the Metal Industry Directory, Standard Metal Directory 1963 – 1964 Edition, the Lake Calumet Smelting Company was listed as a zinc smelter, smelter of secondary lead, tin, babbitt, and solder and a wholesale dealer that specialized in scrap metal, located at 651 E. 119<sup>th</sup>, Chicago, Illinois (range of street addresses along E. 119<sup>th</sup> St. may be seen in Appendix B on 1936 – 1950 Sanborn Map).

Material listed as produced were bulk units of babbitt, solder, lead, tin, zinc and die cast metal available for shipping to customers. To produce these metals the process consumed a variety of scrap; bell metal, die cast scrap, metal clippings, castings and turnings, and wire. Waste material from the process appears to be metal slag which was spread throughout the property. No known metal fabrication processes were carried out at this facility. No ferrous metals were utilized or produced. It is not known when the address of the Lake Calumet Smelting Company or Inland Metal Refining Company changed to 11901 S. Champlain Ave, which is the present address, listed by U.S. EPA resulting from a study by William P. Eckel, 2001, entitled The Secondary Lead Smelting Industry (range of street addresses along S. Champlain Ave. may be seen in Appendix B on 1936 – 1950 Sanborn Map). There is no information available to indicate why the address of Lake Calumet Smelting was changed.

According to 1897 & 1936 - 1950 Sanborn Fire Insurance Maps some entire structures and portions of other structures built on the Illinois Terra Cotta Lumber Co. were later utilized by the Lake Calumet Smelting Company. Structures utilized on the Lake Calumet property consisted of three brick buildings. The function of each was listed as storage, factory and vat

facilities. Each was constructed of brick with steel frame and steel beam roof supports. The floors were concrete and the roofs were constructed of concrete over steel beams. The inside curtain walls were brick.

### 2.3 PREVIOUS INVESTIGATIONS

Various field inspections were conducted in subsequent years after Inland Metals' submittal of Part A of their RCRA permit application. RCRA violations were noted on a regular basis during RCRA inspections carried out by IEPA conducted periodically from 1980 through bankruptcy in October 1989. In June 1983 Inland Metals had monitor wells installed on the property. Samples indicated the presence of ammonia, arsenic, iron, lead, zinc, silver, mercury, and chromium. In March 1984 Inland Metals signed a Consent Order agreeing to operate in complete compliance with Transfer, Storage & Disposal regulations. A PA was conducted in May 1985. Additional sampling was conducted by IEPA during January 1987. Illinois EPA follow-up field inspections were completed at the site in December 1989, November 1992, October 1993, and May 2002. In November 1993 HARZA Environmental Services, Inc. submitted a Proposal for Limited Phase I Site Characterization to IEPA. In May 1997 HARZA submitted the Draft Phase I Site Characterization Technology Assessment Report to IEPA.

### 2.4 REGULATORY STATUS

In September 1980 Inland Metal Refining submitted Part A of their RCRA permit application to operate as a generator and Transfer, Storage, Disposal facility. Two units were listed as handling hazardous wastes: A container storage area and a waste pile. Since the submittal Inland had consistent problems complying with RCRA regulations. In September 1988, U.S. EPA RCRA enforcement section exhausted its administrative and judicial efforts against Inland Metals and referred the facility to Superfund. No RCRA implications or actions



are associated with this site at the current time. Information currently available indicates that the site is not under the authority of the Atomic Energy Act (AEA), Uranium Mine Tailings Action (UMTRCA), or the Federal Insecticide Fungicide or Rodenticide Act (FIFRA).

### 3.0 SITE ASSESSMENT ACTIVITIES

#### 3.1 SAMPLING ACTIVITIES

On April 21 - 24, 2008, IEPA personnel from the OSE collected twenty-five soil samples (includes one duplicate), nine Toxicity Characteristic Leaching Procedure (TCLP) soil samples (includes one duplicate), one waste sample, five sediment samples (includes one duplicate) and three groundwater samples (no duplicate, due to limited volume) during the SI at the site. Two background soil samples were collected and one background sediment sample was collected, these are included in the number of samples noted above. All samples were analyzed for the full Target Compound List (TCL). For a list of all constituents analyzed during this investigation please refer to the Target Compound List found in Appendix B.

##### 3.1.1 SOIL SAMPLES

Soil samples were collected from various locations on and off of the property, some of which were near previously studied areas. This was done to determine if contamination found during previous sampling events was still present and if so in what concentrations. Previously unsampled areas were targeted to better determine the areal extent of contamination on-site. Soil sample depth was generally determined by the first indication of contamination present, if any. This was accomplished by inspecting the sample cores both visually and with an XRF and a PPB-RAE air monitoring device. The background soil samples (X118 & X119) were collected from a location north of the property. Soil samples were obtained by use of the IEPA's Geoprobe direct push system, stainless steel hand auger, or stainless steel trowel. Table 1 provides an overall summary of soil samples collected during the SI. Highlighted concentrations within Table 1 indicate key soil samples in which contaminants were detected at concentrations



at least three times background levels, and/or exceeding U.S. EPA Superfund Chemical Data Matrix (SCDM), and /or U.S. EPA Removal Action Levels (RAL's). TCLP samples were collected at soil sample locations, previously identified as having elevated metal concentrations, by use of a X-Ray Fluorescence screening unit (XRF). Sample analysis by this method will determine if a solid waste exhibits the characteristic of toxicity and is leachable into the soil. Table 1A provides a summary of TCLP results for eight soil samples and one waste sample collected during the SI. Figure 5 illustrates the location of soil samples. Table 4 describes each soil sample with its location, depth, and physical appearance. Additional discussions concerning the analytical results of these samples and their impact on the soil exposure pathway may be found in Section 3.2 (Analytical Results), Section 5.0 (Migration Pathways), and Section 6.0 (Additional Risk Based Objectives) of this SI report.

### 3.1.2 SEDIMENT SAMPLES

Sediment samples X201 – X205 were collected to determine if site run-off had transported contamination off-site and into the drainage area north of the property. This area formerly was an unpaved city street known as 119<sup>th</sup> St. The “street” was never used as such and has become a conduit that transports area runoff east toward S. Doty Avenue, east of the Lake Calumet Smelting property. Sediment sample X201 was collected from the northeast corner of the Lake Calumet Smelting property. This location is the site run-off exit point to the off-site drainage area. The background sediment sample (X202) was collected from a point 400 feet west of the northeast corner of the site in the drainage area running between the site and the former street north of the facility. Sediment sample X201 was collected with a stainless steel mud hand auger. Standing water was present at sediment sample location X201. Sediment samples X202 – X205 were collected within the drainage way north of the facility with stainless steel trowels or

stainless steel bucket augers. No standing water was present in the overland flow portion of the drainage way (X202 – X205) at the time of sampling, although these locations were wet. Table 2 provides an overall summary of sediment samples collected during the SI. Highlighted concentrations within Table 2 indicate key sediment samples in which contaminants were detected at concentrations at least three times background levels, and/or exceeding Ontario Sediment Quality Guidelines and/or U.S. EPA Ecotox Thresholds (Ecotox). Figure 5 illustrates the location of sediment samples. Table 4 describes each sediment sample with its location, depth, and physical appearance. Additional discussions concerning the analytical results of these samples and their impact on the surface water migration pathway may be found in Section 3.2 (Analytical Results), Section 5.0 (Migration Pathways), and Section 6.0 (Additional Risk Based Objectives) of this SI report.

### 3.1.3 GROUNDWATER SAMPLES

Groundwater samples obtained from beneath the facility property were collected by use of a screen point-15 groundwater sampler advanced to depth by the IEPA's Geoprobe to determine if contaminants from past site operations still remain in the local groundwater. Samples were collected from one location at the northeast corner of the property (G101), and one location near the east-central area within the fenced portion of the property (G102 & G103 Dup.). Attempts to obtain additional groundwater samples from other locations on the property failed. Sample depth of G101 was between 20 feet and 24 feet below ground surface. A sample was attempted at the depth interval of 24' – 28', however no water entered the sample screen at that depth. The screen was raised to the 20' – 24' interval, which produced water. Sample depth of G102 & G103 was between 24 feet and 28 feet below ground surface. Table 3 provides an overall summary of groundwater samples collected during the SI. Highlighted concentrations within



Table 3 indicate key groundwater samples in which contaminants were detected at concentrations exceeding U.S. EPA National Drinking Water Standard Maximum Contaminant Level's (MCL's) and/or U.S. EPA SCDM benchmarks. Figure 5 illustrates the location of the groundwater samples. Additional discussions concerning the analytical results of these samples and their impact on the groundwater migration pathway may be found in Section 3.2 (Analytical Results), and Section 5.0 (Migration Pathways), and Section 6.0 (Additional Risk Based Objectives) of this SI report.

## 3.2 ANALYTICAL RESULTS

### 3.2.1 SOIL ANALYSIS

Organic soil samples were analyzed by KAP Technologies Inc. in The Woodlands, Texas. Inorganic soil samples were analyzed by ChemTech Consulting Group in Mountainside, New Jersey. TCLP samples were analyzed by STAT Analysis Corporation in Chicago, Illinois. During the process of soil boring, prior to collecting soil samples on the Lake Calumet Smelting property, soil moisture (other than soil being moist to the touch) was found at various depths within eight of the fourteen boring locations throughout the property (X102, X104/X105, X106 - X109, X113, and X114/X115). Moist soil horizons were encountered at depths from four feet to eleven feet below ground surface. Soil moisture was apparent in X102, X107, X109, X113, and X114/X115 at 4'; in X106 from 4' - 8' and 10'; in X108 at 10'; and in X104/X105 at 11'. No odors were encountered while sampling any of the locations; however, the PPB-RAE air monitoring device registered quantifiable substances at the 12'' and 24'' below ground surface horizons in a macro core sample sleeve in boring X114. Soil samples X118 & X119 were collected off of the Lake Calumet Smelting property from the same soil bore approximately 450 feet north of the northwest corner of the property and designated as the shallow and deep

(respectively) background soil samples. The shallow sample, X118, was collected from 6" – 12" below ground surface. The deep sample, X119, was collected from 7' – 8' below ground surface. All soil sample analytical results are compared to the results indicated in these samples.

Analysis of soil samples collected within the respective horizon in each soil bore location (reference Table 1 – Sample Depth) indicated one or more volatile compounds detected at least three times background levels in eight samples, semi-volatile compounds in 11 samples, pesticide compounds in four samples, PCB compounds in three samples, and inorganic compounds in all samples, however, antimony, arsenic, cadmium, chromium, and zinc exceeded SCDM benchmarks in a few samples and lead exceeded RAL's.

In addition to TCL analysis, eight sample locations were analyzed using TCLP method. These samples were chosen for TCLP analysis based on results of previous XRF screening at the respective locations. These locations exhibited elevated heavy metal content when screened with the XRF. TCLP analysis indicates that cadmium exceeds corresponding benchmarks at three locations, and lead exceeds benchmarks at all locations analyzed with TCLP (Reference Table 1A for analytical results). Table 1A also indicates TCLP sample number designation along with the corresponding TCL sample location number.

### 3.2.2 SEDIMENT ANALYSIS

Organic sediment samples were analyzed by KAP Technologies Inc. in The Woodlands, Texas. Inorganic sediment samples were analyzed by ChemTech Consulting Group in Mountainside, New Jersey. Sediment sample X201 is characterized as an in-water segment of the site runoff route. Sediment samples X202 – X205 reflect characteristics of both sediment and soil as they are exposed to water via runoff and ponding during runoff characterized as overland flow due to precipitation events, however, at times of dry weather this runoff route is



not covered with water. However, because these areas are beneath water much of the time, analytical results of all sediment samples are compared to Ontario Sediment Quality Guidelines and Ecotox Thresholds (see Section 6.0 Additional Risk Based Objectives), as well as CERCLA site sample background criteria. Sample X202 is designated as the background for sediment samples. The laboratory analytical results from the in-water sediment sample X201, from the area of ponded water at the northeast corner of the property, indicate that numerous inorganic analytes exceed corresponding background levels (at least 3x background). All other compound concentrations are below respective background levels (Reference Table 2). Analytical results of samples X202, X203, and X205 indicated that background levels for a number of inorganic analytes were exceeded. All other compound concentrations are below respective background levels. Laboratory analytical results of sample X204 revealed numerous compounds and analytes significantly exceeding corresponding background levels (Reference Table 2).

### 3.2.3 GROUNDWATER ANALYSIS

Groundwater samples were collected from two locations on the Lake Calumet Smelting property. Both locations are situated within the fenced portion of the property. One location was near the northeast corner of the property (G101), the second was at the central-east portion of the property (G102 & G103 (duplicate)). Please reference Sample Location Map. Attempts to obtain groundwater from a third and fourth location were abandoned due to lack of sufficient groundwater volume for sample analysis. Analysis of the inorganic fraction of groundwater included, in addition to the non-filtered portion, a separate analysis of the filtered inorganic fraction. These samples are designated with a suffix of "F" attached to the sample number. No groundwater background location was established for this sampling event. Analytical results

from the groundwater samples are therefore solely compared to MCL's and SCDM benchmarks.

Analysis of samples indicate a variety of constituents in detectable concentrations, the majority of these being from the inorganic fraction, several of these exceed MCL's and/or SCDM benchmarks (Reference Table 3).

Photographs of the April 2008 sampling event can be found in Appendix C of this report.

A complete analytical data package for the Lake Calumet Smelting site is located in Appendix D, under a separate cover in Volume 2 of the SI report.

### 3.3 ADDITIONAL DATA

During a previous visit to the former Lake Calumet Smelting Company property on August 10, 2004, personnel from the IEPA OSE collected field based soil and debris data with a X-Ray Fluorescence unit (XRF). Nine soil locations were analyzed around the outside of the concrete floor, foundation and surrounding area within the property boundary. In addition to the nine soil locations, one location on the concrete floor of the former structure was analyzed. A variety of material deposited on the concrete prompted analysis of the floor. An aerial photograph of the Lake Calumet Smelting property and surrounding area has been supplemented with all XRF sample locations (Figure 6). No particular pattern of contamination emerged from analysis of the sample results, other than contamination is throughout the property and all locations analyzed are well above U.S.EPA Removal Action Levels (RAL's) for both, residential and industrial/commercial properties. Removal Action criteria was obtained from U.S. EPA's September 30, 2010 Removal Action Level master table. Contamination was not limited to one particular area, such as immediately adjacent to the former buildings, but was also noted at various locations away from the former structures. Additional information regarding detected



contaminants is presented in Section 5.3 of this document as well as in a summary of all XRF readings presented in Table A (Residential) and Table B (Industrial/Commercial).



## 4.0 SITE SOURCES

This section includes descriptions of the various hazardous waste sources that have been identified at the Lake Calumet Smelting site. The Hazard Ranking System defines a "source" as: "Any area where a hazardous substance has been stored, disposed or placed, plus those soils that have become contaminated from migration of hazardous substance." This does not include surface water or sediments below surface water that have become contaminated.

Information obtained during the Site Inspection identified an area of soil contamination as the source of contamination at Lake Calumet Smelting. As additional information becomes available, the possibility exists that additional sources of contamination may come to light.

### 4.1 CONTAMINATED SOIL (LAKE CALUMET SMELTING PROPERTY)

Through various investigative avenues, it has been determined that prior to the existence of any site occupancy, including the Lake Calumet Smelting Company, the property had been a lowland filled with dredgings and industrial waste from Lake Calumet, the Calumet River, and area industrial plants. The placement of fill material is estimated to have occurred between 1880 and 1895. Through the efforts of various site investigations, soil borings indicate that fill material on the property consists predominantly of slag, cinders, glass and brick fragments from surface to depths up to 32 feet. The former Lake Calumet Smelting Company was classified as a smelter of zinc, smelter of secondary lead, tin, babbitt and solder, and a wholesale dealer in scrap metal. It appears that waste material from the secondary smelting of these metals has been added to the fill previously in place. Prior to field evaluation, the very nature of the former business caused concern regarding potential soil contamination throughout the property. Subsequent review revealed that all buildings, with the exception of remnants of a smoke stack, had been

razed and various piles of debris and demolition waste remain on the property. Through field based soil and debris evaluation, with the IEPA's XRF unit, soil contamination was detected not only on the floor of the former building, but also detected at various locations away from the former structures, throughout the property (lead ranged between 7480ppm – 768,000ppm, zinc 5110ppm – 146,000ppm, and arsenic less than limit of detection – 36,300ppm). All locations analyzed contained one or more constituents, related to lead and zinc smelting, with concentrations well above U.S. EPA RAL's. No confirmatory soil samples were collected during the August 10, 2004 site visit. However, to confirm these preliminary observations, soil samples were collected, as part of this April 2008 SI, throughout the property. Most were collected near those locations screened with the XRF during the August 10, 2004 site visit. Laboratory analytical results of the soil samples indicate numerous compounds and analytes significantly exceeding corresponding background levels (at least 3x background) and/or SCDM benchmarks throughout the property (Reference Table 2). Lead exceeds the site soil background levels (at least 3x background) in nineteen of the soil samples. In addition, TCLP regulatory levels for lead were exceeded in all nine samples analyzed with the TCLP method. The total approximate area of soil contamination is calculated to be 5.7 acres (248,292 square feet). Potential or observed impacts to targets are discussed in Section 5.3 Soil Exposure, of this report.



## **5.0 MIGRATION PATHWAYS**

As identified in CERCLA's Hazard Ranking System, the OSE evaluates three migration pathways and one exposure pathway. Sites are evaluated on their known or potential impact these pathways have on human health and the environment. The following paragraphs will evaluate the groundwater, surface water, soil exposure, and air migration pathways.

### **5.1 GROUNDWATER**

The former Lake Calumet Smelting Company site is situated 2000 – 2200 feet west of Lake Calumet on relatively flat terrain of surficial fill that covers the Lake Calumet area. Various thicknesses of fill comprise the land surface around Lake Calumet. Surface elevation of the facility is approximately 590 feet above mean sea level. Borings and well logs completed at numerous locations and at various times during the 20<sup>th</sup> Century have indicated fill ranging from approximately two and one half feet thick as near as 500 feet west of Lake Calumet to as much as twenty and thirty feet thick approximately 3000 feet east of the Lake. A general pattern of ten feet or greater of fill is known to exist immediately adjacent to Lake Calumet. Based on these logs and supporting information fill beneath the facility is approximately eight to ten feet thick. The two main sources of fill in the Lake Calumet area were slag waste from steel production and dredgings from the deepening and channelization of the Calumet River system. Significant amounts of other solid wastes were also used as fill, such as household trash, fly ash, solid industrial wastes, and demolition debris including bricks, wood, metal scraps, concrete, and cinders. At this facility it appears that waste material from the secondary smelting of lead has been added to the fill previously in place.

Geology of the area consists of unconsolidated lake sediments and glacial tills overlying Silurian dolomite bedrock. The bedrock surface is approximately 65 feet below ground surface beneath the facility and slopes toward the east at about five feet per mile. A few dolomite outcrops exist in the area as evidenced by the Stony Island area three miles north of the facility. The deposits overlying the dolomite generally consist of two till members of the Wedron Formation. The lower member, the Lemont Drift, ranges in thickness from 0 – 60 feet and is known to be approximately 15 feet thick beneath the facility. The upper member, the Wadsworth Till, ranges in thickness from 0 – 40 feet. Beneath the facility the Wadsworth Till is known to be approximately 40 feet thick. Both of these units, the Lemont Drift and the Wadsworth Till, are described as gray silty clays with traces of sand and gravel. The upper surface of the till also slopes toward the east, in a similar manner and rate as the bedrock. The unconsolidated lake sediments above the till are of the Equality Formation comprised of beach sands and lacustrine sands, silts, and clays deposited on the floor of Lake Michigan during the post-glacial period following the major drop in water level as the lake went from the glacial Lake Chicago stage to the early Lake Michigan stage. Large sand deposits were brought into the area east and south of Lake Calumet by currents and wave action caused by retreating glaciers. These sand deposits are known as the Dalton Sand Member. The sand pinches out toward the western portion of Lake Calumet as this area was once near the former shoreline of glacial Lake Chicago. The sand in the area beneath the Lake Calumet Smelting facility eroded and was replaced by the Wedron till Formation.

The direction of groundwater flow in the Lake Calumet area is difficult to determine due to the variety of fill material and the intense human activity in the area. However, the Illinois State Water Survey (ISWS) has determined that the general direction of flow is in a radial



pattern toward Lake Calumet. During high water episodes groundwater may flow away from the lake area. According to ISGS and ISWS information, depth to groundwater, in wells finished in the drift and till, in the Lake Calumet area is approximately 35 feet below ground surface. Depth to groundwater in wells finished in the shallow dolomite bedrock aquifer can be as shallow as 60 feet below ground surface.

Most area residents and businesses obtain their drinking water from the City of Chicago which utilizes Lake Michigan as the sole source of drinking water for the metropolitan area. Surface water intakes are located in cribs placed approximately two miles from shore in Lake Michigan. Water is pumped to the main filtration plant north of Navy Pier prior to distribution to the metropolitan water systems. The ISWS database indicates that there may, however, be approximately 10 private wells still in existence between two and one half miles and four miles from the former Lake Calumet Smelting property still using groundwater. These private wells utilize the shallow dolomite aquifer for drinking water supplies. The ISWS database indicates that there are no public water supplies within four miles of the former Lake Calumet Smelting property. While groundwater grab samples collected from two locations on the property indicate MCL exceedances of several compounds and groundwater below the property appears to have been impacted by former site activities, it is unlikely that the surrounding population is being affected by this facility, as the nearest private drinking water well is approximately two and one half miles south of the facility and the general trend of groundwater flow from the facility area is east toward Lake Calumet.

**Number of wells and users within 4-miles of  
Lake Calumet Smelting Company**

<u>Distance</u>	<u>Groundwater Wells</u>	<u>Private Well Population</u>	<u>Public Well Population</u>
0 – ¼ mile	0	0	0
¼ - ½ mile	0	0	0
½ - 1 mile	0	0	0
1 – 2 miles	0	0	0
2 – 3 miles	4	11	0
3 – 4 miles	6	17	0

Population based on average persons per household (2.72 for Cook Co.) 2000 Bureau of the Census

## 5.2 SURFACE WATER

The surface water runoff route for this property is described as follows: any excess moisture caused by precipitation flows into low areas on the property resulting in ponding that either evaporates or percolates into the soil on site. If excess moisture runs off site it flows toward the north side of the property where there is a low area immediately off-site. The low area holds moisture most of the time due to the existence of a heavy growth of Phragmites. Runoff from this location trends toward the east in the low areas of the unpaved city street known as 119<sup>th</sup> St. The “street” was never used as such and has become a conduit that transports area runoff east toward S. Doty Avenue. During a major rain event heavy run-off enters the west drainage ditch trending north – south adjacent to S. Doty Avenue where it ponds and eventually evaporates or is absorbed into the soil. Light run-off does not make it to the drainage ditch



adjacent to S. Doty Avenue, it remains in 119<sup>th</sup> St. as ponded water and evaporates or is absorbed into the soil. No city street storm drains, curb storm drains, or area drains could be found near the facility. As indicated on the Lake Calumet USGS topographic map, Lake Calumet is 1000 – 1500 feet east of the facility. Additional perennial and/or intermittent waterways are present within 1.5 miles of the former Lake Calumet Smelting property. However, no run off routes to these waterways have been observed that would transport surface water from the facility to a probable point of entry (PPE) into any nearby water body or Lake Calumet. Therefore, it appears that there is no potential for release to the surface water pathway associated with this site.

According to the National Wetland Inventory Maps the nearest wetland to the former Lake Calumet Smelting Co. facility is located approximately 2340 feet southwest. This wetland is described as: palustrine, emergent, semi-permanently flooded environment (Figure 7).

A review of a Federal Emergency Management Agency Flood Insurance Rate Map for incorporated areas of the Lake Calumet area of Cook County (Panel # 170074 0120 B) indicates that the facility is located outside of the 500 year floodplain, a Zone C designation.

### 5.3 SOIL EXPOSURE

The soil exposure pathway appears to be the primary concern associated with the former Lake Calumet Smelting facility based upon information gathered during the August 10, 2004 site visit, April 25, 2006 site reconnaissance and Preliminary Assessment, and the April 21 – 24, 2008 Site Investigation. The facility is located in an urban setting of mixed light - medium industrial businesses with residential properties within one-half mile. While half of the property



is fenced (surrounding the former location of structures and facility operations) in an effort to deter trespassing, the remaining half is completely accessible. There are no indications that the property is used for recreational purposes, however, there are several breeches in the fence (created by physical force) and a gate along the south property boundary is unable to close and lock, which allow access to the former production area of the property. Although the nearest residential neighborhoods are at a distance of one half mile and major thoroughfares separate the facility from these neighborhoods there is a moderate probability that the property is used by neighborhood trespassers from time to time. It should be noted that because the facility has little vegetative cover and due to the detection of various heavy metal analytes, specifically lead, significantly above site soil background levels and in excess of SCDM benchmarks, on the soil surface and on the floor of the former facility structure, the risk of exposure to anyone disturbing the surface of the facility is greatly increased. Other than the heavy metal analytes detected on the property, there are no other known complaints of dumping, spills or incidents resulting in contamination of the soil and no visible signs of any anomalies. There have been no known reports or complaints of foul and/or noxious odors emanating from the former facility.

**Nearby population within one mile of the site**

<u>Distance</u>	<u>Population</u>
On-Site	0
0 – ¼ mile	0
¼ - ½ mile	422
½ - 1 mile	12737

Population based on average persons per household (2.72 for Cook Co.) 2000 Bureau of the Census

#### 5.4 AIR ROUTE

During the April 21 - 24, 2008 Site Inspection a Toxic Vapor Analyzer (TVA) and a PPB-RAE was utilized to screen for volatile constituents in ambient air around the facility, air in the breathing zone, near building debris and drums, and in the immediate proximity to any sample being collected. All readings registered at background levels of approximately 2.5 units under calm conditions. There are no records, reports or complaints on file of air releases from the facility or odors emanating from the facility. As mentioned previously, the facility has various types of vegetative cover, mainly at the perimeter of the property that will assist in preventing some airborne migration of windblown particulates. However, due to the majority of the property being devoid of vegetation (reference Figures 3 and 4), surface soil being of a powdery nature, and laboratory detection of various heavy metal analytes exceeding U. S. EPA RAL's and SCDM benchmarks on the soil surface and on the floor of the former site structure, the potential for contaminated airborne particulates to be released via the air pathway is a concern.



**Individuals potentially exposed to air-borne contaminants**

<u>Distance</u>	<u>Population</u>
On-site	0
0 – ¼ mile	40
¼ - ½ mile	1050
½ - 1 mile	7200
1 – 2 miles	55,770
2 – 3 miles	124,800
3 – 4 miles	248,000

Population based on average persons per household (2.72 for Cook Co.) 2000 Bureau of the Census

## 6.0 ADDITIONAL RISK-BASED OBJECTIVES

This section discusses additional risk-based objectives used to evaluate the former Lake Calumet Smelting Company facility. These objectives have not been used to evaluate the site for Hazard Ranking System purposes.

Because the former Lake Calumet Smelting property is located in a light – medium industrial area, U.S. EPA RAL's for industrial/commercial properties have been used for evaluation of site conditions and potential for exposure of nearby workers (on adjacent property) or anyone disturbing the site soil. Review of analysis of field based XRF samples collected August 10, 2004 indicate the industrial/commercial RAL for lead (800 mg/kg) was exceeded in all nine XRF soil sample locations (#166 - #171 and #173 - #175) and also at the one location (#172) on the floor of the facility's former structure. The RAL for zinc (1,000,000 mg/kg) is equaled or exceeded in one sample location (#169). The RAL for arsenic (180 mg/kg) is exceeded in four soil sample locations (#166, #167, #169, and #175). Also, because the site is as close as one half mile from some residences, U.S. EPA RAL's for residential properties are used to evaluate potential for exposure of area residents to contaminated soil. Analysis of XRF samples indicate the RAL for lead (400 mg/kg) is exceeded in all nine XRF soil sample locations (#166 - #171 and #173 - #175) and also at the one location (#172) on the floor of the facility's former structure. The RAL for zinc (250,000 mg/kg) is exceeded in one soil sample location (#169). The RAL for arsenic (39 mg/kg) is exceeded in all nine soil sample locations (#166 - #171 and #173 - #175). Reference Figure 6 and Table A of this report for XRF sample locations and associated data. Review of laboratory analysis of soil samples collected April 21 – 24, 2008 indicate the industrial/commercial RAL for lead (800 mg/kg) was exceeded in nineteen of the soil sample locations, all but one (X125) were from the shallow or surface horizon of the soil (0"



– 14” below ground surface). Reference Table 1. Soil sample analysis also identified numerous samples exceeding background levels for corresponding compounds, however, no other RAL benchmarks were exceeded.

Sediment samples that were collected during the SI were compared to ecological benchmarks to help determine whether former site activities have impacted the surface water pathway. Two different ecological benchmarks were used for this comparison: Ontario Sediment Quality Guidelines and U.S. EPA Ecotox thresholds. Ontario standards are non-regulatory ecological benchmark values that serve as indicator of potential aquatic impacts. Levels of contaminants below Ontario benchmarks indicate a level of pollution that has no effect on the majority of sediment-dwelling organisms. Levels of contaminants above a severe effect Ontario benchmark can cause a pronounced disturbance of the sediment-dwelling community. Ecotox thresholds are ecological benchmarks above which there is sufficient concern regarding adverse ecological effect to warrant further site investigation. Ecotox thresholds and Ontario Sediment Quality Guidelines are to be used for screening purposes and are not used as regulatory, site-specific cleanup standards or remediation goals.

As indicated in the narrative in section 3.2.2, compounds and analytes contained in samples X202 – X205 significantly exceeded Ontario benchmarks and/or Ecotox thresholds. However, since this drainage route is basically truncated east of the facility at S. Doty Avenue and there has never been any continually flowing water or standing water for a significant amount of time to support aquatic life, the issue of ecological effect on aquatic life along this route does not exist. At the location of sample X201, where ponded water exists, the significant benchmark exceedances of inorganic analytes may be causing harm to the sediment dwelling community, although no visible organisms were noted while conducting the April 2008 Site Inspection. All

other compound concentrations are below respective guidelines and levels. Reference Table 2. Laboratory analytical results of sample X204 revealed numerous compounds and analytes significantly exceeding corresponding benchmarks and/or thresholds. Analytical results of samples X202, X203, and X205 indicated that the Ontario benchmark for 4,4-DDT was exceeded. Also significantly exceeding Ontario benchmarks in these samples are numerous inorganic analytes.



## 7.0 SUMMARY

Lake Calumet Smelting Company was initially investigated by the IEPA in response to a U.S. EPA Region V request to investigate former lead smelting businesses within the City of Chicago. IEPA personnel conducted a Pre-CERCLIS Screening Assessment (PCS) of this site on August 10, 2004. As a result of this investigation, Lake Calumet Smelting Company was recommended for further evaluation and placed on the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) list as a site discovery. The site was placed on CERCLIS in response to concerns that past site activities may have resulted in releases of heavy metals onto the ground around the facility, and thereby entering the environment.

The investigations included collection of XRF soil samples throughout the former Lake Calumet Smelting Company property, including samples of unknown material on concrete flooring of the former facility building. The Removal Action Level for lead was exceeded at all ten XRF sample locations, the RAL for zinc was exceeded at one XRF location, and the RAL for arsenic was exceeded at nine XRF locations. Due to the site being adjacent to active businesses with workers routinely conducting operations in an outdoor environment and the facility being within one-half mile of residential neighborhoods, access to the facility and contact with contaminants are of concern. Further investigation in the form of a Site Inspection was deemed necessary to determine the contaminant concentrations through laboratory analysis and to also determine if there are other potential sources of contamination that may remain on the property resulting from potential improper waste disposal during the years the site was used as a smelter.

The soil exposure pathway was the primary focus of the April 21- 24, 2008 Site Inspection

with the air pathway being a secondary concern. While the property is fenced, there are however, several breeches in the fence (created by physical force) and a gate along the south property boundary that is unable to close and lock allowing access to the site. The nearest residential neighborhoods are approximately one half mile from the site. The potential exists, as evidenced by the presence of foot prints, discarded soft drink cans and bottles, bicycle tire tracks, off-road motorcycle tracks, etc., that the property is used by neighborhood trespassers from time to time. Also, workers from adjacent businesses potentially have access to the property. Because the surface soil is of a powdery nature and the facility not having an abundance of vegetative cover the risk of exposure to anyone disturbing the surface of the facility is greatly increased. In addition, due to these conditions the potential for contaminated airborne particulates to be released via the air pathway is a concern. Laboratory analytical data from soil, sediment and groundwater samples indicate that each media has been impacted. Significant contamination from inorganic analytes is determined to be the result of the facility's former smelting operations. Numerous compounds and analytes were found to exceed background levels (many at or exceeding 3x or 10x background levels) in soil samples, in addition to lead exceeding RAL's in nineteen soil samples and antimony, arsenic, cadmium, chromium, and zinc exceeding SCDM benchmarks in several samples. Numerous compounds and analytes were found to be significantly exceeding RAL's, Ontario benchmarks or Ecotox thresholds in sediment samples. Several inorganic analytes exceeded MCL's in each of the groundwater samples collected.

Contamination of groundwater and surface water due to site conditions are of lesser concern than soil contamination based on geologic and topographic features within the surrounding area. Geologic conditions such as 65 feet of unconsolidated lake sediments and



glacial tills overlying Silurian dolomite bedrock restrict migration of groundwater from the site. Topographic conditions such as the site being level, the surrounding property on the east, south and west being filled to a level which is higher in elevation than the former Lake Calumet Smelting Company property prevents surface water migration from the site in those directions. The property to the north appears to be level with or slightly lower in elevation than the former Lake Calumet Smelting Company property. If excess moisture runs off site it flows toward the north side of the property, enters the low area immediately off-site in the abandoned 119<sup>th</sup> Street corridor, accumulates and/or flows east toward S. Doty Ave. where the drainage route is truncated. There is no drainage route beyond this point and there is no probable point of entry (PPE) into any water body. In light of this and the information gained through laboratory analytical results from the various sample events it appears that a release to the surface water pathway is not a concern associated with this site, nor is a release to groundwater. However, the potential for contact with surface soil is a concern as is the potential for off-site migration of airborne particulates.

## 8.0 REFERENCES

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## **FIGURES and TABLES**



Lake Calumet Smelting Co.

**Site Location**

Figure 1





Lake Calumet Smelting and Surrounding Area

FIGURE 2





Lake Calumet Smelting  
Property Map  
FIGURE 3





1939/1940 Aerial Photography  
Illinois Terra Cotta Lumber Co./Lake Calumet Smelting

FIGURE 4





1939/1940 Aerial Photograph  
Illinois Terra Cotta Lumber Co./Lake Calumet Smelting

FIGURE 4





Lake Calumet Smelting  
Sample Location Map  
FIGURE 5



# Wetland I.D. near Lake Calumet Smelting Co

**Legend**

- Ohio\_wet\_scan
  - 0
  - 1
  - Out of range
- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
  - Estuarine and Marine Deepwater
  - Estuarine and Marine Wetland
  - Freshwater Emergent Wetland
  - Freshwater Forested/Shrub Wetland
  - Freshwater Pond
  - Lake
  - Other
  - Riverine
- Lower 48 Available Wetland Data
  - Non-Digital
  - Digital
  - No Data
  - Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America

**Map center: 41° 40' 42" N, 87° 36' 23" W**

**Scale: 1:20,000**

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

# Wetland I.D. near Lake Calumet Smelting Co

**Legend**

- Ohio\_wet\_scan
  - 0
  - 1
  - Out of range
- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
  - Estuarine and Marine Deepwater
  - Estuarine and Marine Wetland
  - Freshwater Emergent Wetland
  - Freshwater Forested/Shrub Wetland
  - Freshwater Pond
  - Lake
  - Other
  - Riverine
- Lower 48 Available Wetland Data
  - Non-Digital
  - Digital
  - No Data
  - Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America

**Map center: 41° 40' 42" N, 87° 36' 23" W**

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LAKE CALUMET SMELTING  
Lake Calumet, Illinois

TABLE 1

Analytical Results (Qualified Data)												
Case #: 37407												
SDG : E0047												
Site : LAKE CALUMET SMELTING												
Lab. : KAP												
Reviewer :												
Date :												
Sample Number :	Sampling Location :	Matrix :	Units :	Date Sampled :	Sample Depth :	% Moisture :	pH :	Dilution Factor :	Volatil Compound	Shallow Background (X116)	Deep Background (X116)	RAL Value Indust. Com.
E0047	X101	Soil	ug/Kg	4/21/2008	3" - 12"	4	5.1	5.3	1.0	6.6 R	4.7 U	6.6 R
E0048	X102	Soil	ug/Kg	4/21/2008	3" - 12"	4	5.1	5.3	1.0	6.6 R	4.7 U	6.6 R
E0049	X103	Soil	ug/Kg	4/21/2008	6" - 12"	14	5.6	5.6	1.0	6.6 R	4.7 U	6.6 R
E0050	X104	Soil	ug/Kg	4/21/2008	6" - 18"	16	5.8	5.8	1.0	6.6 R	4.7 U	6.6 R
E0051	X105	Soil	ug/Kg	4/21/2008	13" - 14"	32	5.6	5.6	1.0	6.6 R	4.7 U	6.6 R
E0052	X106	Soil	ug/Kg	4/21/2008	6" - 14"	23	5.3	5.3	1.0	6.6 R	4.7 U	6.6 R
E0053	X107	Soil	ug/Kg	4/21/2008	6" - 14"	20	5.6	5.6	1.0	6.6 R	4.7 U	6.6 R
E0054	X108	Soil	ug/Kg	4/22/2008	6" - 14"	26	5.6	5.6	1.0	6.6 R	4.7 U	6.6 R
E0055	X109	Soil	ug/Kg	4/22/2008	6" - 14"	11	5.6	5.6	1.0	6.6 R	4.7 U	6.6 R
E0056	X110	Soil	ug/Kg	4/22/2008	6" - 14"	31	5.3	5.3	1.0	6.6 R	4.7 U	6.6 R
1,1,1-Trichloro-1,2,2-trifluoroethane												
Acetone												
Carbon disulfide												
Methyl acetate												
trans-1,2-Dichloroethene												
Methyl tert-butyl ether												
1,1-Dichloroethane												
cis-1,2-Dichloroethene												
2-Butanone												
Bromochloromethane												
Chloroform												
1,1,1-Trichloroethane												
Cyclohexane												
Carbon tetrachloride												
Benzene												
1,2-Dichloroethane												
1,4-Dioxane												
Trichloroethene												
Methylcyclohexane												
1,2-Dichloropropane												
Bromodichloromethane												
cis-1,3-Dichloropropene												
4-Methyl-2-pentanone												
Toluene												
trans-1,3-Dichloropropene												
1,1,2-Trichloroethane												
Tetrachloroethene												
2-Hexanone												
Dibromochloromethane												
1,2-Dibromochloroethane												
Chlorobenzene												
Ethylbenzene												
o-Xylene												
m,p-Xylene												
Styrene												
Bromoforn												
Isopropylbenzene												
1,1,2,2-Tetrachloroethane												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												
1,2-Dichlorobenzene												
1,2-Dibromo-3-chloropropane												
1,2,4-Trichlorobenzene												

\* If background result is flagged "J" or "U" then any corresponding compound result without a flag is considered exceeding background.

Values highlighted in RED exceed corresponding benchmark level.

Values highlighted in BLUE exceed corresponding background level.

-- Values not established.



## TABLE 1

1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,3,5-Trichlorobenzene	1,2,4,5-Tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3,4-Tetrachlorobenzene	1,2,3,6-Tetrachlorobenzene	1,2,3,4,5-Pentachlorobenzene	1,2,3,4,6-Pentachlorobenzene	1,2,3,4,5,6-Hexachlorobenzene
1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,3,5-Trichlorobenzene	1,2,4,5-Tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3,4-Tetrachlorobenzene	1,2,3,6-Tetrachlorobenzene	1,2,3,4,5-Pentachlorobenzene	1,2,3,4,6-Pentachlorobenzene	1,2,3,4,5,6-Hexachlorobenzene

\* If background result is flagged "J" or "U" then any corresponding compound result will be "J" or "U".



## LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 1

## Analytical Results (Qualified Data)

Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	Shallow Background (X118)	Deep Background (X119)	RAL Value Indust./Com.	E0075 X121 Soil ug/Kg	E0082 X122 Soil ug/Kg	E0083 X123 Soil ug/Kg	E00J0 X124 Soil ug/Kg	E00J1 X125 Soil ug/Kg					
Sampling Location :													
Matrix :	(X118)	(X119)											
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Date Sampled :	3X Bkgnd*	3X Bkgnd*		4/23/2008	4/23/2008	4/23/2008	5/15/2008	5/15/2008					
Sample Depth :	if non-"J"	if non-"J"		6" - 14"	2" - 6"	2" - 6"	6" - 14"	7" - 8"					
%Moisture :	or	or		15	24	22	16	8					
pH :	10X Bkgnd	10X Bkgnd		5.6	6.1	5.7	6.9	7.0					
Dilution Factor :	if "J"	if "J"		1.0	1.0	1.0	1.0	1.0					
Volatile Compound				Result	Flag	Result	Flag	Result	Flag	Result	Flag		
Dichlorodifluoromethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Chloromethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Vinyl chloride				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Bromomethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Chloroethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Trichlorofluoromethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
1,1-Dichloroethene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
1,1,2-Trichloro-1,2,2-trifluoroethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Acetone			2.0E+09	13	U	14	U	14	U	7.1	J	11	U
Carbon disulfide				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Methyl acetate				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Methylene chloride			76,000,000	2.9	J	6.9	U	2.4	J	6.5	U	5.5	U
trans-1,2-Dichloroethene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Methyl tert-butyl ether				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
1,1-Dichloroethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
cis-1,2-Dichloroethene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
2-Butanone				13	U	14	U	14	U	13	U	11	U
Bromochloromethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Chloroform				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
1,1,1-Trichloroethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Cyclohexane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Carbon tetrachloride				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Benzene			20,000,000	6.7	U	6.9	U	28	J	0.93	J	5.5	U
1,2-Dichloroethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
1,4-Dioxane				130	U	140	U	140	U	130	R	110	R
Trichloroethene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Methylcyclohexane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
1,2-Dichloropropane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Bromodichloromethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
cis-1,3-Dichloropropene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
4-Methyl-2-pentanone			—	2.4	J	14	U	14	U	13	U	11	U
Toluene	11.4/38	6.0/20	1.E+09	7.5	J	6.9	U	3.3	J	6.5	U	5.5	U
trans-1,3-Dichloropropene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
1,1,2-Trichloroethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Tetrachloroethene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
2-Hexanone				13	U	14	U	14	U	13	U	11	U
Dibromochloromethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
1,2-Dibromoethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Chlorobenzene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Ethylbenzene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
o-Xylene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
m,p-Xylene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Styrene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
Bromoform				6.7	R	6.9	U	6.8	R	6.5	U	5.5	U
Isopropylbenzene				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
1,1,2,2-Tetrachloroethane				6.7	U	6.9	U	6.8	U	6.5	U	5.5	U
1,3-Dichlorobenzene				6.7	R	6.9	U	6.8	R	6.5	U	5.5	U
1,4-Dichlorobenzene				6.7	R	6.9	U	6.8	R	6.5	U	5.5	U
1,2-Dichlorobenzene				6.7	R	6.9	U	6.8	R	6.5	U	5.5	U
1,2-Dibromo-3-chloropropane				6.7	R	6.9	U	6.8	R	6.5	U	5.5	U
1,2,4-Trichlorobenzene				6.7	R	6.9	U	6.8	R	6.5	U	5.5	U
1,2,3-Trichlorobenzene				6.7	R	6.9	U	6.8	R	6.5	U	5.5	U

\* If background result is flagged "J" or "U" then any corresponding compound result without a flag is considered exceeding background.

Values highlighted in RED exceed corresponding benchmark level.

Values highlighted in BLUE exceed corresponding background level.

-- Values not established.



## Lake Calumet, Illinois

TABLE 1

Analytical Results (Qualified Data)  
Case #: 37407  
SDD: E0047  
LAKE CALUMET SMELTING  
KAP

Reviewer:

Date:

Sample Number :	Shallow Background (X118)	Deep Background (X119)	RAI Value Indant.Com	E0047	E0048	E0049	E0050	E0051	E0052	E0053	E0054	E0055	E0056
Sampling Location :	Soil	Soil	ug/Kg	X101	X102	X103	X104	X105	X106	X107	X108	X109	X110
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Units Sampled :	3X Bkgnd	3X Bkgnd	3X Bkgnd	3X Bkgnd	3X Bkgnd	3X Bkgnd	3X Bkgnd	3X Bkgnd	3X Bkgnd	3X Bkgnd	3X Bkgnd	3X Bkgnd	3X Bkgnd
Date Sampled :	5"-12"	5"-12"	5"-12"	4/21/2008	4/21/2008	4/21/2008	4/21/2008	4/21/2008	4/21/2008	4/21/2008	4/21/2008	4/22/2008	4/22/2008
Sample Depth :	5"-12"	5"-12"	5"-12"	5"-12"	5"-12"	5"-12"	5"-12"	5"-12"	5"-12"	5"-12"	5"-12"	5"-12"	5"-12"
%Moisture :	26	26	26	26	26	26	26	26	26	26	26	26	26
pH :	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Dilution Factor :	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Result	Flg	Flg	Flg	Flg	Flg	Flg	Flg	Flg	Flg	Flg	Flg	Flg	Flg
Benzo(a)anthracene	240	U	180	U	200	U	200	U	250	U	210	U	250
Benzo(a)pyrene	240	U	180	U	200	U	200	U	250	U	210	U	250
Benzo(b)fluoranthene	240	U	180	U	200	U	200	U	250	U	210	U	250
Benzo(k)fluoranthene	240	U	180	U	200	U	200	U	250	U	210	U	250
2-Chlorophenol	240	U	180	U	200	U	200	U	250	U	210	U	250
2-Methylphenol	240	U	180	U	200	U	200	U	250	U	210	U	250
2,2'-Oxybis(1-chloropropane)	240	U	180	U	200	U	200	U	250	U	210	U	250
Acetophenone	240	U	180	U	200	U	200	U	250	U	210	U	250
4-Methylphenol	240	U	180	U	200	U	200	U	250	U	210	U	250
N-Nitrosodipropylamine	240	U	180	U	200	U	200	U	250	U	210	U	250
Hexachlorocyclopentadiene	240	U	180	U	200	U	200	U	250	U	210	U	250
Nicotine	240	U	180	U	200	U	200	U	250	U	210	U	250
Acetone	240	U	180	U	200	U	200	U	250	U	210	U	250
2,4-Dimethylphenol	240	U	180	U	200	U	200	U	250	U	210	U	250
2,4-Dichlorophenol	240	U	180	U	200	U	200	U	250	U	210	U	250
2,4-Dichlorophenylmethane	240	U	180	U	200	U	200	U	250	U	210	U	250
Naphthalene	240	U	180	U	200	U	200	U	250	U	210	U	250
4-Chlorophenol	240	U	180	U	200	U	200	U	250	U	210	U	250
Hexachlorocyclopentadiene	240	U	180	U	200	U	200	U	250	U	210	U	250
Caproic acid	240	U	180	U	200	U	200	U	250	U	210	U	250
3-Chlorobenzylphenol	240	U	180	U	200	U	200	U	250	U	210	U	250
3-Chlorobenzylphenylmethane	240	U	180	U	200	U	200	U	250	U	210	U	250
Hexachlorocyclopentadiene	240	U	180	U	200	U	200	U	250	U	210	U	250
2,4,6-Trichlorophenol	240	U	180	U	200	U	200	U	250	U	210	U	250
2,4,5-Trichlorophenol	240	U	180	U	200	U	200	U	250	U	210	U	250
1,1'-Biphenyl	240	U	180	U	200	U	200	U	250	U	210	U	250
2-Chloronaphthalene	240	U	180	U	200	U	200	U	250	U	210	U	250
2-Nitroanisole	240	U	180	U	200	U	200	U	250	U	210	U	250
Dimethylphthalate	240	U	180	U	200	U	200	U	250	U	210	U	250
2,6-Dimethylphenol	240	U	180	U	200	U	200	U	250	U	210	U	250
2-Nitrophenol	240	U	180	U	200	U	200	U	250	U	210	U	250
Acetophenone	240	U	180	U	200	U	200	U	250	U	210	U	250
2,4-Dimethylphenol	240	U	180	U	200	U	200	U	250	U	210	U	250
4-Nitrophenol	240	U	180	U	200	U	200	U	250	U	210	U	250
Dibenzofuran	240	U	180	U	200	U	200	U	250	U	210	U	250
Dimethylphthalate	240	U	180	U	200	U	200	U	250	U	210	U	250
Fluorene	240	U	180	U	200	U	200	U	250	U	210	U	250
4-Chlorophenyl-phenyl ether	240	U	180	U	200	U	200	U	250	U	210	U	250
4-Chlorophenyl-phenylmethane	240	U	180	U	200	U	200	U	250	U	210	U	250
4,4'-Dichloro-2-methylphenol	240	U	180	U	200	U	200	U	250	U	210	U	250
N-Nitrosodipropylamine	240	U	180	U	200	U	200	U	250	U	210	U	250
1,2,4,5-Tetrachlorobenzene	240	U	180	U	200	U	200	U	250	U	210	U	250
4-Bromophenyl-phenyl ether	240	U	180	U	200	U	200	U	250	U	210	U	250
Hexachlorobenzene	240	U	180	U	200	U	200	U	250	U	210	U	250
Atrazine	240	U	180	U	200	U	200	U	250	U	210	U	250
Perfluorobenzophenone	240	U	180	U	200	U	200	U	250	U	210	U	250
Phenanthrene	240	U	180	U	200	U	200	U	250	U	210	U	250
Acetophenone	240	U	180	U	200	U	200	U	250	U	210	U	250
2,4-Dichlorophthalate	240	U	180	U	200	U	200	U	250	U	210	U	250
Fluorene	240	U	180	U	200	U	200	U	250	U	210	U	250
Propyl	240	U	180	U	200	U	200	U	250	U	210	U	250
Bis(2-ethylhexyl)phthalate	240	U	180	U	200	U	200	U	250	U	210	U	250
Benzo(a)anthracene	240	U	180	U	200	U	200	U	250	U	210	U	250
Benzo(a)pyrene	240	U	180	U	200	U	200	U	250	U	210	U	250
Benzo(b)fluoranthene	240	U	180	U	200	U	200	U	250	U	210	U	250
Benzo(k)fluoranthene	240	U	180	U	200	U	200	U	250	U	210	U	250
2-Methylphenol	240	U	180	U	200	U	200	U	250	U	210	U	250
2,4-Dichlorophenol	240	U	180	U	200	U	200	U	250	U	210	U	250
Hexachlorobenzene	240	U	180	U	200	U	200	U	250	U	210	U	250
Indene(1,2,3-cd)pyrene	240	U	180	U	200	U	200	U	250	U	210	U	250
Benzo(a)anthracene	240	U	180	U	200	U	200	U	250	U	210	U	250
Benzo(a)pyrene	240	U	180	U	200	U	200	U	250	U	210	U	250

Benzo(a)anthracene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U  
Benzo(a)pyrene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Benzo(b)fluoranthene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Benzo(k)fluoranthene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2-Chlorophenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2-Methylphenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2,2'-Oxybis(1-chloropropane) 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Acetophenone 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
4-Methylphenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
N-Nitrosodipropylamine 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Hexachlorocyclopentadiene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Nicotine 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Acetone 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2,4-Dimethylphenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2,4-Dichlorophenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2,4-Dichlorophenylmethane 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Naphthalene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
4-Chlorophenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Hexachlorocyclopentadiene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Caproic acid 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
3-Chlorobenzylphenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
3-Chlorobenzylphenylmethane 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Hexachlorocyclopentadiene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2,4,6-Trichlorophenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2,4,5-Trichlorophenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
1,1'-Biphenyl 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2-Chloronaphthalene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2-Nitroanisole 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Dimethylphthalate 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2,6-Dimethylphenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2-Nitrophenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Acetophenone 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2,4-Dimethylphenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
4-Nitrophenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Dibenzofuran 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Dimethylphthalate 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Fluorene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
4-Chlorophenyl-phenyl ether 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
4-Chlorophenyl-phenylmethane 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
4,4'-Dichloro-2-methylphenol 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
N-Nitrosodipropylamine 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
1,2,4,5-Tetrachlorobenzene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
4-Bromophenyl-phenyl ether 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Hexachlorobenzene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Atrazine 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Perfluorobenzophenone 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Phenanthrene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Acetophenone 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
2,4-Dichlorophthalate 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Fluorene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Propyl 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Bis(2-ethylhexyl)phthalate 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Benzo(a)anthracene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U  
Benzo(a)pyrene 240 U 180 U 200 U 200 U 250 U 210 U 250 U 250 U 210 U 250 U 250 U 250 U 250 U

2.3.4.6. Tetrahydrofuran

- If background result is flagged "U" then any corresponding compound result flagged "U" is also a background result.

Values highlighted in **RED** exceed corresponding benchmark level. **BLUE** values exceeding background level.

Values highlighted in

— Values not established.



**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 1

[illegible]

2.1.6.7 tetraethanol

\* If background result is flagged "J" then any corresponding compound result flagged "J".

- Values not established.



**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 1

Analytical Results (Qualified Data)													
Case #: 37407		SDG : E0074											
Site :		LAKE CALUMET SMELTING											
Lab :		KAP											
Reviewer :													
Date :													
Sample Number :	Shallow Background (X118)	Deep Background (X119)	RAL Value Indust./Com.	E0075 X121 Soil ug/Kg	E0082 X122 Soil ug/Kg	E0083 X123 Soil ug/Kg	E00J0 X124 Soil ug/Kg	E00J1 X125 Soil ug/Kg					
Sampling Location :													
Matrix :													
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Date Sampled :	3X Bkgnd*	3X Bkgnd*		4/23/2008	4/23/2008	4/23/2008	5/15/2008	5/15/2008					
Sample Depth :	6" - 14"	6" - 12"		6" - 14"	2" - 6"	2" - 6"	6" - 12"	7" - 8"					
%Moisture :	or	or		15	24	22	16	8					
pH :	10X Bkgnd	10X Bkgnd		5.6	6.1	5.7	6.9	7.0					
Dilution Factor :	if "J"	if "J"		1.0	1.0	1.0	5.0	5.0					
Semivolatile Compound				Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde				200	U	220	U	220	U	1000	U	910	U
Phenol				200	U	220	U	220	U	1000	U	910	U
Bis(2-chloroethyl)ether				200	U	220	U	220	U	1000	U	910	U
2-Chlorophenol				200	U	220	U	220	U	1000	U	910	U
2-Methylphenol				200	U	220	U	220	U	1000	U	910	U
2,2'-Oxybis(1-chloropropane)				200	U	220	U	220	U	1000	U	910	U
Acetophenone				200	U	220	U	220	U	1000	U	910	U
4-Methylphenol				200	U	220	U	220	U	1000	U	910	U
N-Nitroso-di-n-propylamine				200	U	220	U	220	U	1000	U	910	U
Hexachloroethane				200	U	220	U	220	U	1000	U	910	U
Nitrobenzene				200	U	220	U	220	U	1000	U	910	U
Isophorone				200	U	220	U	220	U	1000	U	910	U
2-Nitrophenol				200	U	220	U	220	U	1000	U	910	U
2,4-Dimethylphenol				200	U	220	U	220	U	1000	U	910	U
Bis(2-chloroethoxy)methane				200	U	220	U	220	U	1000	U	910	U
2,4-Dichlorophenol				200	U	220	U	220	U	1000	U	910	U
Naphthalene				200	U	220	U	220	U	1000	U	910	U
4-Chloroaniline				200	U	220	U	220	U	1000	U	910	U
Hexachlorobutadiene				200	U	220	U	220	U	1000	U	910	U
Caprolactam				200	U	220	U	220	U	1000	U	910	U
4-Chloro-3-methylphenol				200	U	220	U	220	U	1000	U	910	U
2-Methylnaphthalene				200	U	220	U	220	U	1000	U	910	U
Hexachlorocyclopentadiene				200	U	220	U	220	U	1000	U	910	U
2,4,6-Trichlorophenol				200	U	220	U	220	U	1000	U	910	U
2,4,5-Trichlorophenol				200	U	220	U	220	U	1000	U	910	U
1,1'-Biphenyl				200	U	220	U	220	U	1000	U	910	U
2-Chloronaphthalene				200	U	220	U	220	U	1000	U	910	U
2-Nitroaniline				300	U	430	U	420	U	1900	U	1800	U
Dimethylphthalate				200	U	220	U	220	U	1000	U	910	U
2,6-Dinitrotoluene				200	U	220	U	220	U	1000	U	910	U
Acenaphthylene				200	U	52	J	60	J	1000	U	910	U
3-Nitroaniline				390	U	430	U	420	U	1900	U	1800	U
Acenaphthene				200	U	220	U	220	U	1000	U	910	U
2,4-Dinitrophenol				390	U	430	U	420	U	1900	U	1800	U
4-Nitrophenol				390	U	430	U	420	U	1900	U	1800	U
Dibenzofuran				200	U	220	U	220	U	1000	U	910	U
2,4-Dinitrotoluene				200	U	220	U	220	U	1000	U	910	U
Diethylphthalate				200	U	220	U	220	U	1000	U	110	J
Fluorene			8.2E+08	200	U	220	U	220	U	1000	U	910	U
4-Chlorophenyl-phenylether				390	U	430	U	420	U	1900	U	1800	U
4-Nitroaniline				390	U	430	U	420	U	1900	U	1800	U
4,6-Dinitro-2-methylphenol				200	U	220	U	220	U	1000	U	910	U
N-Nitrosodiphenylamine				200	U	220	U	220	U	1000	U	910	U
1,2,4,5-Tetrachlorobenzene				200	U	220	U	220	U	1000	U	910	U
4-Bromophenyl-phenylether				200	U	220	U	220	U	1000	U	910	U
Hexachlorobenzene				200	U	220	U	220	U	1000	U	910	U
Atrazine				200	U	220	U	220	U	1000	U	910	U
Pentachlorophenol				390	R	430	R	420	R	1900	U	1800	R
Phenanthrene	270/900		1.0E+09	52	J	210	J	170	J	860	J	910	J
Anthracene			1.0E+09	200	U	60	J	220	U	200	J	190	J
Carbazole				200	U	220	U	220	U	1000	U	910	U
Di-n-butylphthalate			1.0E+09	200	U	220	U	220	U	130	J	910	U
Fluoranthene	480/1600		8.2E+08	120	J	510	J	450	J	1200	J	960	J
Pyrene	390/1300		6.1E+08	110	J	400	J	380	J	850	J	1100	J
Butylbenzylphthalate				200	U	220	U	220	U	1000	U	910	U
3,3'-Dichlorobenzidine				200	U	220	U	220	U	1000	U	910	U
Benzo(a)anthracene	840/2800		780,000	62	J	250	J	230	J	760	J	1000	J
Chrysene	300/1000		78,000,000	80	J	310	J	300	J	840	J	1000	J
Bis(2-ethylhexyl)phthalate			41,000,000	74	J	73	J	72	J	1000	U	910	U
Di-n-octylphthalate				200	U	220	U	220	U	1000	U	910	U
Benzo(b)fluoranthene	294/980		780,000	81	J	220	J	300	J	780	J	1400	J
Benzo(k)fluoranthene	219/730		7,800,000	53	J	230	J	230	J	910	J	650	J
Benzo(a)pyrene	258/860		78,000	71	J	240	J	260	J	920	J	1500	J
Indeno(1,2,3-cd)pyrene			780,000	200	U	220	U	220	U	660	J	740	J
Dibenzo(a,h)anthracene			78,000	42	J	87	J	89	J	1000	U	910	U
Benzo(g,h,i)perylene			--	200	U	220	U	220	U	900	J	1300	J
2,3,4,6-Tetrachlorophenol				200	U	220	U	220	U	1000	U	910	U

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.  
 Values highlighted in **RED** exceed corresponding benchmark level.  
 Values highlighted in **BLUE** exceed corresponding background level.  
 -- Values not established.



# LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 1

## Analytical Results (Qualified Data)

Case #: 37407  
SDG : E0047  
LAKE CALUMET SMELTING  
Site :  
Lab : KAP  
Reviewer :  
Date :

Sample Number :	Shallow Background (X118) ug/Kg 3X Bkgnd* if non-"J" or 10X Bkgnd if "J"	Deep Background (X119) ug/Kg 3X Bkgnd* if non-"J" or 10X Bkgnd if "J"	RAL Value Indust./Com. ug/Kg	E0047 X101 Soil ug/Kg 4/21/2008 3"- 12" 28 5.1 1.0	E0048 X102 Soil ug/Kg 4/21/2008 3"- 12" 4 4.9 1.0	E0049 X103 Soil ug/Kg 4/21/2008 6"- 12" 14 5.3 1.0	E0050 X104 Soil ug/Kg 4/21/2008 6"- 18" 16 5.8 1.0	E0051 X105 Soil ug/Kg 4/21/2008 13"- 14" 32 5.6 1.0	E0052 X106 Soil ug/Kg 4/21/2008 6"- 14" 23 5.3 1.0	E0053 X107 Soil ug/Kg 4/21/2008 6"- 14" 20 5.6 1.0	E0054 X108 Soil ug/Kg 4/22/2008 6"- 14" 26 5.7 1.0	E0055 X109 Soil ug/Kg 4/22/2008 6"- 14" 11 5.6 1.0	E0056 X110 Soil ug/Kg 4/22/2008 6"- 14" 31 5.3 1.0
Pesticide Compound													
alpha-BHC				2.4 U	1.8 U	2.0 U	2.0 U	2.5 U	2.2 U	2.1 U	2.3 U	1.9 U	2.5 U
beta-BHC				2.4 U	1.8 U	2.0 U	2.0 U	2.5 U	2.2 U	2.1 U	2.3 U	1.9 U	2.5 U
delta-BHC				2.4 U	1.8 U	2.0 U	2.0 U	2.5 U	2.2 U	2.1 U	2.3 U	1.9 U	2.5 U
gamma-BHC (Lindane)				2.4 U	1.8 U	2.0 U	2.0 U	2.5 U	2.2 U	2.1 U	2.3 U	1.9 U	2.5 U
Heptachlor				2.4 U	1.8 U	2.0 U	2.0 U	2.5 U	2.2 U	2.1 U	2.3 U	1.9 U	2.5 U
Aldrin				2.4 U	1.8 U	2.0 U	2.0 U	2.5 U	2.2 U	2.1 U	2.3 U	1.9 U	2.5 U
Heptachlor epoxide				2.4 U	1.8 U	2.0 U	2.0 U	2.5 U	2.2 U	2.1 U	2.3 U	1.9 U	2.5 U
Endosulfan I				2.4 U	1.8 U	2.0 U	2.0 U	2.5 U	2.2 U	2.1 U	2.3 U	1.9 U	2.5 U
Dieldrin				4.6 U	3.4 U	3.8 U	3.9 U	4.9 U	4.3 U	4.1 U	4.5 U	3.7 U	4.8 U
4,4'-DDE				4.6 U	3.4 U	3.8 U	3.9 U	4.9 U	4.3 U	4.1 U	4.5 U	3.7 U	4.8 U
Endrin				4.6 U	3.4 U	3.8 U	3.9 U	4.9 U	4.3 U	4.1 U	4.5 U	3.7 U	4.8 U
Endosulfan II				4.6 U	3.4 U	3.8 U	3.9 U	4.9 U	4.3 U	4.1 U	4.5 U	3.7 U	4.8 U
4,4'-DDD				4.6 U	3.4 U	3.8 U	3.9 U	4.9 U	4.3 U	4.1 U	4.5 U	3.7 U	4.8 U
Endosulfan sulfate				4.6 U	3.4 U	3.8 U	3.9 U	4.9 U	4.3 U	4.1 U	4.5 U	3.7 U	4.8 U
4,4'-DDT			1,700,000	4.6 U	3.4 U	3.8 U	3.9 U	4.9 U	4.3 U	4.1 U	4.5 U	3.7 U	4.8 U
Methoxychlor				24 U	18 U	20 U	20 U	25 U	22 U	21 U	23 U	19 U	25 U
Endrin ketone				4.6 U	3.4 U	3.8 U	3.9 U	4.9 U	4.3 U	4.1 U	4.5 U	3.7 U	4.8 U
Endrin aldehyde				4.6 U	3.4 U	3.8 U	3.9 U	4.9 U	4.3 U	4.1 U	4.5 U	3.7 U	4.8 U
alpha-Chlordane				2.4 U	1.8 U	2.0 U	2.0 U	2.5 U	2.2 U	2.1 U	2.3 U	1.9 U	2.5 U
gamma-Chlordane				2.4 U	1.8 U	2.0 U	2.0 U	2.5 U	2.2 U	2.1 U	2.3 U	1.9 U	2.5 U
Toxaphene				240 U	180 U	200 U	200 U	250 U	220 U	210 U	230 U	190 U	250 U

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in RED exceed corresponding benchmark level.

Values highlighted in BLUE exceed corresponding background level.

-- Values not established.



**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 1

**Analytical Results (Qualified Data)**

Case #: 37407  
SDG : E0047  
LAKE CALUMET SMELTING  
KAP

Site :  
Lab :  
Reviewer :  
Date :

Sample Number :	Shallow Background (X118)	Deep Background (X119)	RAL Value Indust./Com.	E0057 X111 Soil ug/Kg	E0058 X112 Soil ug/Kg	E0060 X113 Soil ug/Kg	E0061 X114 Soil ug/Kg	E0062 X115 Soil ug/Kg	E0065 X116 Soil ug/Kg	E0067 X117 Soil ug/Kg	E0072 X118 Soil ug/Kg	E0073 X119 Soil ug/Kg	E0074 X120 Soil ug/Kg
Sampling Location :													
Matrix :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Units :	3X Bkgnd*	3X Bkgnd*		4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/23/2008	4/23/2008	4/23/2008
Date Sampled :	if non-"J"	if non-"J"		6" - 10"	8.5" - 9"	6" - 14"	6" - 12"	8" - 9"	0" - 8"	0" - 8"	6" - 12"	7" - 8"	6" - 14"
Sample Depth :				14	14	33	44	44	13	63	18	22	14
%Moisture :				4.9	5.1	5.9	5.6	5.7	6.1	5.3	6.3	5.9	6.1
pH :				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Dilution Factor :													
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result
alpha-BHC	2.0	U	2.0	U	2.5	U	3.0	U	1.9	U	4.6	U	2.0
beta-BHC	2.0	U	2.0	U	2.5	U	3.0	U	1.9	U	4.6	U	2.0
delta-BHC	2.6	U	2.0	U	2.5	U	3.0	U	1.9	U	4.6	U	2.0
gamma-BHC (Lindane)	2.0	U	2.0	U	2.5	U	3.0	U	1.9	U	4.6	U	2.0
Heptachlor	2.0	U	2.0	U	2.5	U	3.0	U	1.9	U	4.6	U	2.0
Aldrin	2.0	U	2.0	U	2.5	U	3.0	U	1.9	U	4.6	U	2.0
Heptachlor epoxide	2.0	U	2.0	U	2.5	U	3.0	U	1.9	U	4.6	U	2.0
Endosulfan I	2.0	U	2.0	U	2.5	U	3.0	U	1.9	U	4.6	U	2.0
Dieldrin	3.8	U	3.8	U	4.9	U	5.9	U	3.8	U	8.9	U	3.8
4,4'-DDE	3.8	U	1,700,000	U	4.9	U	5.9	U	3.8	U	9.2	U	3.8
Endrin	3.8	U	3.8	U	4.9	U	5.9	U	3.8	U	8.9	U	3.8
Endosulfan II	3.8	U	3.8	U	4.9	U	5.9	U	3.8	U	8.9	U	3.8
4,4'-DDD	3.8	U	2,400,000	U	4.9	U	5.9	U	3.8	U	8.9	U	3.8
Endosulfan sulfate	3.8	U	3.8	U	4.9	U	5.9	U	3.8	U	8.9	U	3.8
4,4'-DDT	3.7	J	1,700,000	U	4.9	U	5.9	U	3.8	U	3.2	J	3.5
Methoxychlor	20	U		U	25	U	30	U	19	U	21	U	20
Endrin ketone	3.8	U		U	4.9	U	5.9	U	3.8	U	4.0	U	3.8
Endrin aldehyde	3.8	U		U	4.9	U	5.9	U	3.8	U	4.0	U	3.8
alpha-Chlordane	2.0	U		U	2.5	U	3.0	U	1.9	U	2.1	U	2.0
gamma-Chlordane	2.0	U		U	2.5	U	3.0	U	1.9	U	2.1	U	2.0
Toxaphene	200	U		U	250	U	300	U	190	U	210	U	200

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in RED exceed corresponding benchmark level.

Values highlighted in BLUE exceed corresponding background level.

-- Values not established.



# LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 1

Analytical Results (Qualified Data)											
Case #: 37407		SDG : E0047									
Site :		LAKE CALUMET SMELTING									
Lab. :		KAP									
Reviewer :											
Date :											
Sample Number :	Shallow Background (X118)	Deep Background (X119)	RAL Value Indust./Com.	E0075 X121 Soil ug/Kg	E0082 X122 Soil ug/Kg	E0083 X123 Soil ug/Kg	E00J0 X124 Soil ug/Kg	E00J1 X125 Soil ug/Kg			
Sampling Location :											
Matrix :											
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg			
Date Sampled :	3X Bkgnd*	3X Bkgnd*		4/23/2008	4/23/2008	4/23/2008	5/15/2008	5/15/2008			
Sample Depth :	if non-"J"	if non-"J"		6" - 14"	2" - 6"	2" - 6"	6" - 14"	7' - 8'			
%Moisture :	or	or		15	24	22	16	8			
pH :	10X Bkgnd	10X Bkgnd		5.6	6.1	5.7	6.9	7.0			
Dilution Factor :	if "J"	if "J"		1.0	1.0	1.0	1.0	1.0			
Pesticide Compound				Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC			--	2.0	U	2.2	U	2.2	U	0.93	J
beta-BHC			--	2.0	U	2.2	U	2.2	U	6.4	J
delta-BHC			--	2.0	U	2.2	U	2.2	U	2.0	U
gamma-BHC (Lindane)				2.0	U	2.2	U	2.2	U	2.0	U
Heptachlor			130,000	2.0	U	2.2	U	2.2	U	1.7	J
Aldrin			34,000	2.0	U	2.2	U	2.2	U	2.0	U
Heptachlor epoxide			63,000	2.0	U	1.5	J	2.8	J	2.0	U
Endosulfan I			1.2E+08	2.0	U	2.2	U	2.2	U	2.0	U
Dieldrin				3.9	U	4.3	U	4.2	U	2.0	U
4,4'-DDE	9.0/30		1,700,000	3.9	U	130	J	160	J	3.8	U
Endrin			6,100,000	3.9	U	4.3	U	4.2	U	3.8	U
Endosulfan II				3.9	U	4.3	U	4.2	U	3.8	U
4,4'-DDD	11.4/38		2,400,000	3.9	U	33	J	38	J	3.8	U
Endosulfan sulfate				3.9	U	4.3	U	4.2	U	3.8	U
4,4'-DDT	7.5/25		1,700,000	3.9	U	120	J	180	J	19	J
Methoxychlor			1.0E+08	20	U	22	U	22	U	12	J
Endrin ketone			--	3.9	U	4.3	U	4.2	U	1.7	J
Endrin aldehyde			--	3.9	U	4.3	U	4.2	U	14	J
alpha-Chlordane				2.0	U	2.2	U	2.2	U	2.0	U
gamma-Chlordane			440,000	2.0	U	2.2	U	2.2	U	5.8	J
Toxaphene				200	U	220	U	220	U	200	U

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in **RED** exceed corresponding benchmark level.

Values highlighted in **BLUE** exceed corresponding background level.

-- Values not established.

**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 1

**Analytical Results (Qualified Data)**

Case #: 37407  
Site : LAKE CALUMET SMELTING  
Lab. : KAP  
Reviewer :  
Date :

SDG : E0047

LAKE CALUMET SMELTING

KAP

Sample Number :	Shallow Background (X118) ug/Kg 3X Bkgnd* if non-"J" or 10X Bkgnd if "J"	Deep Background (X119) ug/Kg 3X Bkgnd* if non-"J" or 10X Bkgnd if "J"	RAL Value Indust./Com. ug/Kg	E0047 X101 Soil ug/Kg 4/21/2008 3"- 12" 28 5.1 1.0	E0048 X102 Soil ug/Kg 4/21/2008 3"- 12" 4 4.9 1.0	E0049 X103 Soil ug/Kg 4/21/2008 6"- 12" 14 5.3 1.0	E0050 X104 Soil ug/Kg 4/21/2008 6"- 18" 16 5.8 1.0	E0051 X105 Soil ug/Kg 4/21/2008 13"- 14" 32 5.6 1.0	E0052 X106 Soil ug/Kg 4/21/2008 6"- 14" 23 5.3 1.0	E0053 X107 Soil ug/Kg 4/21/2008 6"- 14" 20 5.6 1.0	E0054 X108 Soil ug/Kg 4/22/2008 6"- 14" 26 5.7 1.0	E0055 X109 Soil ug/Kg 4/22/2008 6"- 14" 11 5.6 1.0	E0056 X110 Soil ug/Kg 4/22/2008 6"- 14" 31 5.3 1.0
Matrix :													
Units :													
Date Sampled :													
Sample Depth :													
%Moisture :													
pH :													
Dilution Factor :													
ANALYTE				Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016			1,400,000	46	U	34	U	38	U	39	U	48	U
Aroclor-1221			286,000	46	U	34	U	38	U	39	U	48	U
Aroclor-1232			286,000	46	U	34	U	38	U	39	U	48	U
Aroclor-1242			286,000	46	U	34	U	38	U	39	U	48	U
Aroclor-1248			286,000	46	U	34	U	38	U	39	U	48	U
Aroclor-1254			410,000	46	U	34	U	38	U	39	U	48	U
Aroclor-1260			286,000	21	J	34	U	19	J	39	U	48	U
Aroclor-1262			286,000	46	U	34	U	38	U	39	U	48	U
Aroclor-1268			286,000	46	U	34	U	38	U	39	U	48	U

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in **RED** exceed corresponding benchmark level.

Values highlighted in **BLUE** exceed corresponding background level.

-- Values not established.



**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 1

Analytical Results (Qualified Data)													
Case #: 37407      SDG : E0047      LAKE CALUMET SMELTING													
Site :      Lab : KAP													
Reviewer :      Date :													
Sample Number :	Shallow Background (X118)	Deep Background (X119)	RAL Value Indust./Com.	E0057 X111 Soil ug/Kg	E0058 X112 Soil ug/Kg	E0060 X113 Soil ug/Kg	E0061 X114 Soil ug/Kg	E0062 X115 Soil ug/Kg	E0065 X116 Soil ug/Kg	E0067 X117 Soil ug/Kg	E0072 X118 Soil ug/Kg	E0073 X119 Soil ug/Kg	E0074 X120 Soil ug/Kg
Sampling Location :				4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/23/2008	4/23/2008	4/23/2008
Matrix :				6" - 10"	8.5' - 9'	6" - 14"	6" - 12"	8' - 9'	0" - 8"	0" - 8"	6" - 12"	7' - 8'	6" - 14"
Units :				14	14	33	44	44	13	63	18	22	14
Date Sampled :				4.9	5.1	5.9	5.6	5.7	6.1	5.3	6.3	5.9	6.1
Sample Depth :				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
%Moisture :													
pH :													
Dilution Factor :													
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result
Aroclor-1016			1,400,000		38 U		49 U		59 U		38 U		42 U
Aroclor-1221			286,000		38 U		49 U		59 U		40 U		42 U
Aroclor-1232			286,000		38 U		49 U		59 U		40 U		42 U
Aroclor-1242			286,000		38 U		49 U		59 U		40 U		42 U
Aroclor-1248			286,000	150	38 U		21 J		59 U		40 U		42 U
Aroclor-1254			410,000		38 U		49 U		59 U		40 U		42 U
Aroclor-1260			286,000		38 U		49 U		59 U		40 U		42 U
Aroclor-1262			286,000		38 U		49 U		59 U		40 U		42 U
Aroclor-1268			286,000		38 U		49 U		59 U		40 U		42 U

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in RED exceed corresponding benchmark level.

Values highlighted in BLUE exceed corresponding background level.

-- Values not established.

# LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 1

<b>Analytical Results (Qualified Data)</b>													
Case #: 37407		SDG : E0047											
Site :		LAKE CALUMET SMELTING											
Lab. :		KAP											
Reviewer :													
Date :													
Sample Number :	Shallow	Deep	RAL Value	E0075	E0082	E0083	E00J0	E00J1					
Sampling Location :	Background	Background	Indust./Com.	X121	X122	X123	X124	X125					
Matrix :	(X118)	(X119)		Soil	Soil	Soil	Soil	Soil					
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Date Sampled :	3X Bkgnd*	3X Bkgnd*		4/23/2008	4/23/2008	4/23/2008	5/15/2008	5/15/2008					
Sample Depth :	if non-"J"	if non-"J"		6" - 14"	2" - 6"	2" - 6"	6" - 14"	7" - 8'					
%Moisture :	or	or		15	24	22	16	8					
pH :	10X Bkgnd	10X Bkgnd		5.6	6.1	5.7	6.9	7.0					
Dilution Factor :	if "J"	if "J"		1.0	1.0	1.0	1.0	1.0					
ANALYTE				Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016			1,400,000	39	U	44	U	42	U	39	U	36	U
Aroclor-1221			286,000	39	U	44	U	42	U	39	U	36	U
Aroclor-1232			286,000	39	U	44	U	42	U	39	U	36	U
Aroclor-1242			286,000	39	U	44	U	42	U	39	U	36	U
Aroclor-1248			286,000	39	U	44	U	42	U	39	U	36	U
Aroclor-1254			410,000	39	U	44	U	42	U	39	U	36	U
Aroclor-1260			286,000	39	U	44	U	42	U	39	UJ	36	U
Aroclor-1262			286,000	39	U	44	U	42	U	39	U	36	U
Aroclor-1268			286,000	39	U	44	U	42	U	39	U	36	U

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in **RED** exceed corresponding benchmark level.

Values highlighted in **BLUE** exceed corresponding background level.

-- Values not established.



# LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 1

## Analytical Results (Qualified Data)

Case #: 37407  
SDG : ME0047  
LAKE CALUMET SMELTING  
Lab. :  
Reviewer :  
Date :

Sample Number :	Shallow Background (X118)	Deep Background (X119)	RAL Value Indust./Com.	USEPA SCDM Benchmarks	ME0047 X101 Soil mg/Kg	ME0048 X102 Soil mg/Kg	ME0049 X103 Soil mg/Kg	ME0050 X104 Soil mg/Kg	ME0051 X105 Soil mg/Kg	ME0052 X106 Soil mg/Kg	ME0053 X107 Soil mg/Kg	ME0054 X108 Soil mg/Kg	ME0055 X109 Soil mg/Kg	ME0056 X110 Soil mg/Kg
Matrix :	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Date Sampled :	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"
Sample Depth :	or	or	or	or	or	or	or	or	or	or	or	or	or	or
%Solids :	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"	10X Bkgnd if "J"
pH :														
Dilution Factor :														
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	24120		22700		353		5820		27500		847		915	
ANTIMONY	30		25.8		54.2		2.8	J	4.0	J	92.0		2.0	J
ARSENIC	54.6		27.7		10.7		30.9		8.2		40.8		1090	
BARIUM	4440		176		15.7	J	167		139		49.9		1220	
BERYLLIUM	3		0.88		1.1		1.9		1.3		0.14	J	56.7	
CADMIUM	19		18.0	J	72.0	J	1.6	J	36.6	J	8.8	J	74.7	J
CALCIUM	70500		10300		29200		3890		18000		2670		2170	
CHROMIUM	100.8		29.0		55.4		20.4		36.6		14.4		4.3	
COBALT	20.7		5.2	J	11.6		7.7		11.9		1.3	J	8.1	
COPPER	198		153		1170		107		46.0		637		6510	
IRON	63300		16000		41100		51200		24900		6360		22600	
LEAD	1563		7290		54000		28600		45.9		12500		153600	
MAGNESIUM	28320		5030		9000		775		12900		1520		804	
MANGANESE	864		244		680		105		333		58.7		89.8	
MERCURY	0.39		0.079	J	1.3		0.62	U	0.13	U	0.069	J	0.64	
NICKEL	65.4		21.6		94.9		27.3		34.1		30.0		36.8	
POTASSIUM	13000		2540		693		329	J	6490		80.2	J	168	J
SELENIUM			4.2	U	4.6	U	4.4	U	5.1	U	5.2	U	4.4	U
SILVER			1.2	U	1.3	U	1.3	U	1.5	U	3.2	J	8.2	J
SODIUM	5490		2250		4200		905		3140		252	J	295	J
THALLIUM			3.0	U	3.3	U	3.2	U	3.7	U	3.7	U	2.9	U
VANADIUM	59.1		35.7		30.1		28.2		52.6		4.9	J	3.8	J
ZINC	1545		9420		25400		17700		27300		3320		2720	
CYANIDE	6.1		3.0	U	1.8	J	1.3	J	3.7	U	0.78	J	0.27	J

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in BLUE exceed corresponding background level.

Values highlighted in RED exceed corresponding RAL benchmark.

Values highlighted in GREEN exceed corresponding SCDM benchmark.

Values highlighted in ORANGE exceed corresponding background level and corresponding RAL benchmark.

Values highlighted in VIOLET exceed corresponding background level and corresponding SCDM benchmark.

-- Values not established.



**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 1

Analytical Results (Qualified Data)														
Case #: 37407														
SDG : ME0047														
Site : LAKE CALUMET SMELTING														
Lab : CHEM														
Reviewer :														
Date :														
Sample Number :	Shallow Background (X118)	Deep Background (X119)	RAL Value Indust./Com.	USEPA SCDM Benchmarks mg/kg	ME0057 X111 Soil mg/kg	ME0058 X112 Soil mg/kg	ME0060 X113 Soil mg/kg	ME0061 X114 Soil mg/kg	ME0062 X115 Soil mg/kg	ME0065 X116 Soil mg/kg	ME0067 X117 Soil mg/kg	ME0072 X118 Soil mg/kg	ME0073 X119 Soil mg/kg	ME0074 X120 Soil mg/kg
Sampling Location :	3X Bkgnd*	3X Bkgnd*			4/22/2008 6" - 10"	4/22/2008 8.5" - 9"	4/22/2008 6" - 14"	4/22/2008 6" - 12"	4/22/2008 8" - 9"	4/22/2008 0" - 8"	4/22/2008 0" - 8"	4/23/2008 6" - 12"	4/23/2008 7" - 8"	4/23/2008 6" - 14"
Matrix :	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Units :	3X Bkgnd*	3X Bkgnd*			6" - 10"	8.5" - 9"	6" - 14"	6" - 12"	8" - 9"	0" - 8"	0" - 8"	6" - 12"	7" - 8"	6" - 14"
Date Sampled :					78.6	77.6	82.0	74.7	79.2	87.0	39.5	84.2	78.2	77.8
Sample Depth :					4.9	5.1	5.9	5.6	5.7	6.1	5.3	6.3	5.9	6.1
%Solids :					1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
pH :														
Dilution Factor :														
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	24120		36000		583		741		712		1810		12000	
ANTIMONY	30				152		53.3		93.3		24.5		7.7	
ARSENIC	54.6		5.7		55.1		17.7		239		13.1		1.9	
BARIUM	4440		268.8		45.3		45.7		192		42.3		89.6	
BERYLLIUM	3		5.4		0.18		0.070		0.33		0.18		0.54	
CADMIUM	19				38.6		46.3		26.9		6.8		0.64	
CALCIUM	70500		153900		2470		1230		6690		10600		51300	
CHROMIUM	100.8		66.9		24.1		5.2		21.3		16.0		22.3	
COBALT	20.7		30.3		1.5		1.8		5.3		2.5		10.1	
COPPER	198		45		313		1710		83.0		73.4		15.0	
IRON	63300		56700		18100		6450		20400		8520		18900	
LEAD	1563		26.4		3090		4520		257		2060		8.8	
MAGNESIUM	28320		58500		916		176		1310		3370		19500	
MANGANESE	864		1509		231		57.7		1480		302		503	
MERCURY	0.39				4.5		0.63		0.076		0.48		0.12	
NICKEL	85.4		84.3		28.1		17.6		31.9		13.1		28.1	
POTASSIUM	13000		26900		41.5		31.5		210		374		2690	
SELENIUM					4.5		4.3		4.4		8.9		4.5	
SILVER					0.59		1.3		1.3		2.5		1.3	
SODIUM	5490		1590		179		644		97.7		227		159	
THALLIUM					3.2		3.0		3.2		6.3		3.2	
VANADIUM	59.1		63.9		5.5		3.5		5.8		1.1		21.3	
ZINC	1545		127.5		2490		3850		455		770		42.5	
CYANIDE	6.1				0.88		0.42		0.080		0.18		3.2	

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in BLUE exceed corresponding background level.

Values highlighted in RED exceed corresponding RAL benchmark.

Values highlighted in GREEN exceed corresponding SCDM benchmark.

Values highlighted in ORANGE exceed corresponding background level and corresponding RAL benchmark.

Values highlighted in VIOLET exceed corresponding SCDM benchmark.

-- Values not established.



## LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 1

Analytical Results (Qualified Data)													
Case #: 37407	SDG : ME0047												
Site :	LAKE CALUMET SMELTING												
Lab. :	CHEM												
Reviewer :													
Date :													
Sample Number :	Shallow Background (X118)	Deep Background (X119)	RAL Value Indust./Com.	USEPA SCDM Benchmarks	ME0075 X121 Soil mg/Kg	ME0082 X122 Soil mg/Kg	ME0083 X123 Soil mg/Kg	ME00J0 X124 Soil mg/Kg	ME00J1 X125 Soil mg/Kg	ME0059 X501 Waste mg/Kg			
Matrix :													
Units :	mg/Kg	mg/Kg	mg/Kg	mg/Kg	4/23/2008 6" - 14"	4/23/2008 2" - 6"	4/23/2008 2" - 6"	5/15/2008 6" - 12"	5/15/2008 7" - 8"	4/22/2008 Ground Surface			
Date Sampled :	3X Bkgnd* if non-"J"	3X Bkgnd* if non-"J"			81.5	72.0	74.1	74.8	82.5	76.7			
Sample Depth :	or	or			5.6	6.1	5.7	6.9	7.0				
%Solids :	10X Bkgnd if "J"	10X Bkgnd if "J"			1.0	1.0	1.0	1.0	1.0	1.0			
pH :													
Dilution Factor :													
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag			
ALUMINUM	24120		36000		3910	11600	10500	7850	7420	49.2			
ANTIMONY	30				7.4 U	6.4 J	5.2 J	53.7	170	215			
ARSENIC	54.6		5.7		26.1	160	106	56.6	36.4	108			
BARIUM	4440		268.8		234	648	537	791	944	2.0 J			
BERYLLIUM	3		5.4		160	2.0	1.8	1.5	2.0	0.65 U			
CADMIUM	19				39	7.7 J	5.0 J	9.0	43.3	286 J			
CALCIUM	70500		153900		--	21100	29900	20900	17700	240 J			
CHROMIUM	100.8		66.9		230	66.7	96.1	50.5	108	3.9			
COBALT	20.7		30.3		--	9.5	9.1	22.2	13.4	6.5 U			
COPPER	198		45		--	106	247	235	741	59.5			
IRON	63300		56700		--	54400	57200	127000 J	94200 J	1180			
LEAD	1563		26.4		--	1020	895	3130	10300	3730			
MAGNESIUM	28320		58500		--	3890	5300	2780	2610	69.7 J			
MANGANESE	864		1509		11,000	869	1210	740	436	7.4			
MERCURY	0.39				23	0.29	0.38	5.7	0.55	15.0			
NICKEL	65.4		84.3		1,600	37.3	40.1	91.1	61.7	2.0 J			
POTASSIUM	13000		26900		--	1380 J	1360 J	1170 J	2130 J	53.9 J			
SELENIUM					390	4.9 U	4.7 U	2.5 J	1.4 J	1.4 J			
SILVER					390	1.4 U	1.3 U	1.3 R	1.2 R	3.1			
SODIUM	5490		1590		--	1360	1350	979	987	400 J			
THALLIUM					--	3.5 U	3.4 U	3.3 U	3.0 U	3.2 U			
VANADIUM	59.1		63.9		550	50.1	44.8	34.2	33.3	6.5 U			
ZINC	1545		127.5		23,000	890	714	4920	1880	5780			
CYANIDE	6.1				1,600	1.1 J	0.94 J	0.62 J	0.57 J	3.3 U			

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in BLUE exceed corresponding background level.

Values highlighted in RED exceed corresponding RAL benchmark.

Values highlighted in GREEN exceed corresponding SCDM benchmark.

Values highlighted in ORANGE exceed corresponding background level and corresponding RAL benchmark.

Values highlighted in VIOLET exceed corresponding background level and corresponding SCDM benchmark.

-- Values not established.

**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 1A

**Analytical Results (Qualified Data)**

Case #: 37407

Proj No. 08040871

Site :

LAKE CALUMET SMELTING

Lab. :

STAT

Reviewer :

Date :

Sample Number :	TCLP	Regulatory Level	mg/L	08040871-001	08040871-002	08040871-003	08040871-004	08040871-005	08040871-009	08040871-006	08040871-007	08040871-008
Sampling Location :				T101 (X103)	T102 (X106)	T103 (X108)	T104 (X111)	T105 (X501)	T106 (X114)	T107 (X114)	T108 (X116)	T109 (X120)
Matrix :				Soil (TCLP)	Soil (TCLP)	Soil (TCLP)	Soil (TCLP)	Soil (TCLP)	Soil (TCLP)	Soil (TCLP)	Soil (TCLP)	Soil (TCLP)
Units :				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Sampled :				4/21/2008	4/21/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/23/2008
Sample Depth :				6" - 8"	6"	6" - 14"	6" - 10"	Ground Surface	6" - 12"	6" - 12"	0" - 8"	6" - 14"
Test Method :				SW1311/6020*	SW1311/6020*	SW1311/6020*	SW1311/6020*	SW1311/6020*	SW1311/6020*	SW1311/6020*	SW1311/6020*	SW1311/6020*
pH :				5.3	5.3	5.7	4.9		5.6	5.6	6.1	6.1
Dilution Factor :				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
ANALYTE				Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	5			< 0.4	< 0.4	< 4	< 4	< 4	0.014	< 0.4	< 0.4	< 0.4
BARIUM	100			0.55	0.41	< 4	< 4	< 4	2.4	1.9	0.51	1.5
CADMIUM	1			< 0.2	< 0.2	< 2	< 2	7.3	0.52	0.48	2	1.8
CHROMIUM	5			< 0.4	< 0.4	< 4	< 4	< 4	< 0.01	< 0.4	< 0.4	< 0.4
LEAD	5			1300	1100	1700	300	270	69	99	1200	11
MERCURY	0.2			< 0.00025	< 0.00025	< 0.00025	< 0.00025	0.0012	< 0.00025	< 0.00025	< 0.00025	< 0.00025
SELENIUM	1			< 0.4	< 0.4	< 4	< 4	< 4	< 0.01	< 0.4	< 0.4	< 0.4
SILVER	5			< 0.4	< 0.4	< 4	< 4	< 4	< 0.01	< 0.4	< 0.4	< 0.4

\* Test Method for Mercury - SW1311/7470A

\* Test Method for Cyanide - SW9012A

Values highlighted in **RED** exceed corresponding benchmark level.



**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 2

Analytical Results (Qualified Data)													
Case #: 37407		SDG : E0047											
Site :		LAKE CALUMET SMELTING											
Lab. :		KAP											
Reviewer :													
Date :													
Sample Number :		Background	Ontario	E0064	E0076	E0077	E0078	E0079					
Sampling Location :		(X202)	Sediment	X201	X202	X203	X204	X205					
Matrix :			Benchmarks	Sediment	Sediment	Sediment	Sediment	Sediment					
Units :		ug/Kg	or	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Date Sampled :		3X Bkgnd*	USEPA	4/22/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008					
Sample Depth :		if non-"J"	Ecotox	0" - 12"	0" - 12"	0" - 12"	0" - 8"	0" - 8"					
%Moisture :		or	Threshold**	13	40	51	64	37					
pH :		10X Bkgnd		5.3	5.9	6.3	6.1	5.8					
Dilution Factor :		if "J"	ug/Kg	1.0	1.0	1.0	1.0	1.0					
Volatile Compound				Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Chloromethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Vinyl chloride				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Bromomethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Chloroethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Trichlorofluoromethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,1-Dichloroethene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,1,2-Trichloro-1,2,2-trifluoroethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Acetone				10	U	17	U	19	U	26	U	17	U
Carbon disulfide				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Methyl acetate				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Methylene chloride			--	5.1	U	11		9.6	U	13	U	8.3	U
trans-1,2-Dichloroethene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Methyl tert-butyl ether				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,1-Dichloroethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
cis-1,2-Dichloroethene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
2-Butanone				10	U	17	U	19	U	26	U	17	U
Bromochloromethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Chloroform				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,1,1-Trichloroethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Cyclohexane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Carbon tetrachloride				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Benzene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,2-Dichloroethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,4-Dioxane				100	U	170	U	190	U	260	U	170	U
Trichloroethene			1600**	5.1	U	8.5	U	9.6	U	6.0	J	8.3	U
Methylcyclohexane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,2-Dichloropropane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Bromodichloromethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
cis-1,3-Dichloropropene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
4-Methyl-2-pentanone				10	U	17	U	19	U	26	U	17	U
Toluene		14.4/48	670**	3.2	J	4.8	J	9.6	U	13	U	8.3	U
trans-1,3-Dichloropropene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,1,2-Trichloroethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Tetrachloroethene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
2-Hexanone				10	U	17	U	19	U	26	U	17	U
Dibromochloromethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,2-Dibromoethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Chlorobenzene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Ethylbenzene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
o-Xylene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
m,p-Xylene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Styrene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
Bromoform				5.1	U	8.5	R	9.6	R	13	U	8.3	R
Isopropylbenzene				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,1,2,2-Tetrachloroethane				5.1	U	8.5	U	9.6	U	13	U	8.3	U
1,3-Dichlorobenzene				5.1	U	8.5	R	9.6	R	13	U	8.3	R
1,4-Dichlorobenzene			350**	5.1	U	8.5	R	9.6	R	5.1	J	8.3	R
1,2-Dichlorobenzene				5.1	U	8.5	R	9.6	R	13	U	8.3	R
1,2-Dibromo-3-chloropropane				5.1	U	8.5	R	9.6	R	13	U	8.3	R
1,2,4-Trichlorobenzene				5.1	U	8.5	R	9.6	R	13	U	8.3	R
1,2,3-Trichlorobenzene				5.1	U	8.5	R	9.6	R	13	U	8.3	R

\* If background result is flagged "J" or "U" then any corresponding compound result without a flag is considered exceeding background.

Values highlighted in RED exceed corresponding benchmark level.

Values highlighted in BLUE exceed corresponding background level.

-- Values not established.

\*\* USEPA Ecotox Threshold Value



**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 2

Analytical Results (Qualified Data)													
Case #: 37407			SDG : E0047										
Site :			LAKE CALUMET SMELTING										
Lab. :			KAP										
Reviewer :													
Date :													
Sample Number :		Background (X202)	Ontario Sediment Benchmarks	E0064 X201 Soil ug/Kg 4/22/2008	E0076 X202 Soil ug/Kg 4/23/2008	E0077 X203 Soil ug/Kg 4/23/2008	E0078 X204 Soil ug/Kg 4/23/2008	E0079 X205 Soil ug/Kg 4/23/2008					
Sampling Location :		ug/Kg	or USEPA Ecotox Threshold**	13	40	51	64	37					
Matrix :		3X Bkgnd* if non-"J"		5.3	5.9	6.3	6.1	5.8					
Units :		or											
Date Sampled :		10X Bkgnd if "J"	ug/Kg	1.0	1.0	1.0	1.0	1.0					
Sample Depth :													
%Moisture :													
pH :													
Dilution Factor :													
Semivolatile Compound			Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	
Benzaldehyde			190	U	280	U	350	U	470	U	270	U	
Phenol			190	U	280	U	350	U	470	U	270	U	
Bis(2-chloroethyl)ether			190	U	280	U	350	U	470	U	270	U	
2-Chlorophenol			190	U	280	U	350	U	470	U	270	U	
2-Methylphenol			190	U	280	U	350	U	470	U	270	U	
2,2'-Oxybis(1-chloropropane)			190	U	280	U	350	U	470	U	270	U	
Acetophenone			190	U	280	U	350	U	470	U	270	U	
4-Methylphenol			190	U	280	U	350	U	470	U	120	J	
N-Nitroso-di-n-propylamine			190	U	280	U	350	U	470	U	270	U	
Hexachloroethane			190	U	280	U	350	U	470	U	270	U	
Nitrobenzene			190	U	280	U	350	U	470	U	270	U	
Isophorone			190	U	280	U	350	U	470	U	270	U	
2-Nitrophenol			190	U	280	U	350	U	470	U	270	U	
2,4-Dimethylphenol			190	U	280	U	350	U	470	U	270	U	
Bis(2-chloroethoxy)methane			190	U	280	U	350	U	470	U	270	U	
2,4-Dichlorophenol			190	U	280	U	350	U	470	U	270	U	
Naphthalene			480**	U	280	U	350	U	6800		270	U	
4-Chloroaniline			190	U	280	U	350	U	470	U	270	U	
Hexachlorobutadiene			190	U	280	U	350	U	470	U	270	U	
Caprolactam			190	U	280	U	350	U	470	U	270	U	
4-Chloro-3-methylphenol			190	U	280	U	350	U	470	U	270	U	
2-Methylnaphthalene			--	U	280	U	350	U	11000		270	U	
Hexachlorocyclopentadiene			190	U	280	U	350	U	470	U	270	U	
2,4,6-Trichlorophenol			190	U	280	U	350	U	470	U	270	U	
2,4,5-Trichlorophenol			190	U	280	U	350	U	470	U	270	U	
1,1'-Biphenyl			1100**	U	280	U	350	U	1600		270	U	
2-Chloronaphthalene			190	U	280	U	350	U	470	U	270	U	
2-Nitroaniline			380	U	550	U	670	U	910	U	520	U	
Dimethylphthalate			190	U	280	U	350	U	470	U	270	U	
2,6-Dinitrotoluene			190	U	280	U	350	U	470	U	270	U	
Acenaphthylene			207/690	--	190	U	69	J	350	U	470	U	
3-Nitroaniline			380	U	550	U	670	U	910	U	520	U	
Acenaphthene			620**	U	280	U	350	U	560		270	U	
2,4-Dinitrophenol			380	U	550	U	670	U	910	U	520	U	
4-Nitrophenol			380	U	550	U	670	U	910	U	520	U	
Dibenzofuran			2000**	U	280	U	350	U	6100		270	U	
2,4-Dinitrotoluene			190	U	280	U	350	U	470	U	270	U	
Diethylphthalate			190	U	280	U	350	U	470	U	270	U	
Fluorene			540**	U	280	U	350	U	1500		270	U	
4-Chlorophenyl-phenylether			190	U	280	U	350	U	470	U	270	U	
4-Nitroaniline			380	U	550	U	670	U	910	U	520	U	
4,6-Dinitro-2-methylphenol			380	U	550	U	670	U	910	U	520	U	
N-Nitrosodiphenylamine			--	U	280	U	350	U	820		270	U	
1,2,4,5-Tetrachlorobenzene			190	U	280	U	350	U	470	U	270	U	
4-Bromophenyl-phenylether			190	U	280	U	350	U	470	U	270	U	
Hexachlorobenzene			190	U	280	U	350	U	470	U	270	U	
Atrazine			380	U	550	R	670	R	910	R	520	R	
Pentachlorophenol			190	U	430		520		1200		270	U	
Phenanthrene			1290/4300	850**	190	U	74	J	350	U	1200		
Anthracene			222/740	2000	190	U	74	J	350	U	470	U	
Carbazole					190	U	280	U	350	U	800		
Di-n-butylphthalate				11,000**	190	U	280	U	350	U	800		
Fluoranthene			1560/5200	2900**	55	J	520		480		1400		
Pyrene			1170/3900	660**	65	J	390		550		1900		
Butylbenzylphthalate					190	U	280	U	350	U	470	U	
3,3'-Dichlorobenzidine					190	U	280	U	350	U	470	U	
Benzo(a)anthracene			630/2100	2000	190	U	210	J	220	J	200	J	
Chrysene			630/2100	2000	190	U	210	J	220	J	950		
Bis(2-ethylhexyl)phthalate			--		190	U	280	U	350	U	7600		
Di-n-octylphthalate					190	U	280	U	350	U	470	U	
Benzo(b)fluoranthene			450/1500	2000	190	U	150	J	140	J	200	J	
Benzo(k)fluoranthene			420/1400	2000	190	U	140	J	130	J	260	J	
Benzo(a)pyrene			540/1800	430**	190	U	180	J	190	J	150	J	
Indeno(1,2,3-cd)pyrene				2000	55	J	280	U	350	U	470	U	
Dibenzo(a,h)anthracene			168/560	2000	190	U	56	J	80	J	470	U	
Benzo(g,h,i)perylene				2000	84	J	280	U	350	U	470	U	
2,3,4,6-Tetrachlorophenol					190	U	280	U	350	U	470	U	

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample.

and those sample results without a flag are considered exceeding background.

Values highlighted in RED exceed corresponding benchmark level.

Values highlighted in BLUE exceed corresponding background level.

Values highlighted in ORANGE exceed corresponding background level and corresponding benchmark level.

-- Values not established.

\*\* USEPA Ecotox Threshold Value



# LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 2

Analytical Results (Qualified Data)												
Case #: 37407		SDG : E0047										
Site :		LAKE CALUMET SMELTING										
Lab. :		KAP										
Reviewer :												
Date :												
Sample Number :	Background	Ontario	E0064		E0076		E0077		E0078		E0079	
Sampling Location :	(X202)	Sediment	X201		X202		X203		X204		X205	
Matrix :		Benchmarks	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg	or	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	3X Bkgnd*	USEPA	4/22/2008		4/23/2008		4/23/2008		4/23/2008		4/23/2008	
Sample Depth :	if non-"J"	Ecotox	0" - 12"		0" - 12"		0" - 12"		0" - 8"		0" - 8"	
%Moisture :	or	Threshold**	13		40		51		64		37	
pH :	10X Bkgnd		5.3		5.9		6.3		6.1		5.8	
Dilution Factor :	if "J"	ug/Kg	1.0		1.0		1.0		1.0		1.0	
Pesticide Compound			Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC			1.9	U	2.8	U	3.5	U	4.7	U	2.7	U
beta-BHC			1.9	U	2.8	U	3.5	U	4.7	U	2.7	U
delta-BHC			1.9	U	2.8	U	3.5	U	4.7	U	2.7	U
gamma-BHC (Lindane)			1.9	U	2.8	U	3.5	U	4.7	U	2.7	U
Heptachlor			1.9	U	2.8	U	3.5	U	4.7	U	2.7	U
Aldrin			1.9	U	2.8	U	3.5	U	4.7	U	2.7	U
Heptachlor epoxide			1.9	U	2.8	U	3.5	U	4.7	U	2.7	U
Endosulfan I		2.9**	1.9	U	2.8	U	3.5	U	27		2.7	U
Dieldrin			3.8	U	5.4	U	6.7	U	9.2	U	5.2	U
4,4'-DDE	12.6/42	5	3.8	U	4.2	J	6.3	J	420		5.2	U
Endrin			3.8	U	5.4	U	6.7	U	9.2	U	5.2	U
Endosulfan II			3.8	U	5.4	U	6.7	U	9.2	U	5.2	U
4,4'-DDD		8	3.8	U	5.4	U	3.6	J	770		5.2	U
Endosulfan sulfate			3.8	U	5.4	U	6.7	U	9.2	U	5.2	U
4,4'-DDT	39/130	7	3.8	U	13		19		580		9.9	
Methoxychlor			19	U	28	U	35	U	47	U	27	U
Endrin ketone			3.8	U	5.4	U	6.7	U	9.2	U	5.2	U
Endrin aldehyde			3.8	U	5.4	U	6.7	U	9.2	U	5.2	U
alpha-Chlordane			1.9	U	2.8	U	3.5	U	4.7	U	2.7	U
gamma-Chlordane		7	1.9	U	2.8	U	3.5	U	24		2.7	U
Toxaphene			190	U	280	U	350	U	470	U	270	U

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in **RED** exceed corresponding benchmark level.

Values highlighted in **BLUE** exceed corresponding background level.

Values highlighted in **ORANGE** exceed corresponding background level and corresponding benchmark level.

-- Values not established.

\*\* USEPA Ecotox Threshold Value

## LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 2

Analytical Results (Qualified Data)													
Case #: 37407		SDG : E0047											
Site :		LAKE CALUMET SMELTING											
Lab. :		KAP											
Reviewer :													
Date :													
Sample Number :	Background (X202)	Ontario Sediment Benchmarks	E0064 X201	E0076 X202	E0077 X203	E0078 X204	E0079 X205						
Sampling Location :			Soil	Soil	Soil	Soil	Soil						
Matrix :			ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg						
Units :	ug/Kg	or	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg						
Date Sampled :	3X Bkgnd*	USEPA	4/22/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008						
Sample Depth :	if non-"J"	Ecotox	0" - 12"	0" - 12"	0" - 12"	0" - 8"	0" - 8"						
%Moisture :	or	Threshold**	13	40	51	64	37						
pH :	10X Bkgnd		5.3	5.9	6.3	6.1	5.8						
Dilution Factor :	if "J"	ug/Kg	1.0	1.0	1.0	1.0	1.0						
ANALYTE			Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	
Aroclor-1016			38	U	54	U	67	U	91	U	52	U	
Aroclor-1221			38	U	54	U	67	U	91	U	52	U	
Aroclor-1232			38	U	54	U	67	U	91	U	52	U	
Aroclor-1242			38	U	54	U	67	U	91	U	52	U	
Aroclor-1248			38	U	54	U	67	U	91	U	52	U	
Aroclor-1254			38	U	54	U	67	U	91	U	52	U	
Aroclor-1260			38	U	54	U	67	U	91	U	52	U	
Aroclor-1262			38	U	54	U	67	U	91	U	52	U	
Aroclor-1268			38	U	54	U	67	U	91	U	52	U	

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample, and those sample results without a flag are considered exceeding background.

Values highlighted in **RED** exceed corresponding benchmark level.

Values highlighted in **BLUE** exceed corresponding background level.

-- Values not established.

\*\* USEPA Ecotox Threshold Value



# LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 2

Analytical Results (Qualified Data)												
Case #: 37407		SDG : ME0047										
Site :		LAKE CALUMET SMELTING										
Lab. :		CHEM										
Reviewer :												
Date :												
Sample Number :	Background	Ontario	ME0064	ME0076	ME0077	ME0078	ME0079					
Sampling Location :	(X202)	Sediment	X201	X202	X203	X204	X205					
Matrix :		Benchmarks	Sediment	Sediment	Sediment	Sediment	Sediment					
Units :	mg/Kg	or	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg					
Date Sampled :	3X Bkgnd*	USEPA	4/22/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008					
Sample Depth :	if non-"J"	Ecotox	0" - 12"	0" - 12"	0" - 12"	0" - 8"	0" - 8"					
%Solids :	or	Threshold**	75.0	53.1	53.9	80.6	64.7					
pH :	10X Bkgnd		5.3	5.9	6.3	6.1	5.8					
Dilution Factor :	if "J"	mg/Kg	1.0	1.0	1.0	1.0	1.0					
ANALYTE			Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	22230	--	4360		7410		5770		4720		10000	
ANTIMONY	114.3	--	619		38.1		28.2		477		3.2	J
ARSENIC	108.6	6	440		36.2		33.2		65.4		4.8	
BARIUM	1860	--	257		620		520		334		188	
BERYLLIUM	17	--	0.37	J	1.7		1.2		0.81		0.83	
CADMIUM	186	0.6	98.1	J	18.6	J	21.1	J	27.0	J	1.7	J
CALCIUM	63300	--	20200		21100		14500		36500		129000	
CHROMIUM	184.8	26	73.8		61.6		50.3		57.0		256	
COBALT	31.5	50	13.3		10.5		8.9	J	6.6		5.9	J
COPPER	966	16	9210		322		268		1170		51.9	
IRON	118500	20000	44000		39500		32900		24500		70000	
LEAD	8520	31	15000		2840		2200		8960		469	
MAGNESIUM	16530	--	3130		5510		4090		16900		27100	
MANGANESE	1941	460	332		647		580		561		12000	
MERCURY	5.4	0.2	0.071	J	0.54		0.54		0.12		0.10	UJ
NICKEL	160.2	16	445		53.4		41.6		67.8		18.0	
POTASSIUM	10700	--	556	J	1070	J	998	J	635	J	1380	J
SELENIUM		--	6.4		6.6	U	1.9	J	4.3	U	3.2	J
SILVER		0.5	1.8		1.9	U	1.9	U	2.6		1.5	U
SODIUM	7790	--	11700		779	J	647	J	473	J	578	J
THALLIUM		--	3.3	U	4.7	U	4.6	U	3.0	U	2.2	J
VANADIUM	88.5	--	18.7		29.5		24.3		14.6		236	
ZINC	18930	120	4780		6310		5350		1610		336	
CYANIDE	13	0.1	1.2	J	1.3	J	1.2	J	0.20	J	3.9	U

\* If background result is flagged "U" then any corresponding compound result flagged "J" with a similar detection limit to the background sample,

Values highlighted in **RED** exceed corresponding benchmark level.

Values highlighted in **BLUE** exceed corresponding background level.

Values highlighted in **ORANGE** exceed corresponding background level and corresponding benchmark level.

-- Values not established.



# LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 3

Analytical Results (Qualified Data)													
Case #: 37407		SDG : E0066											
Site :		LAKE CALUMET SMELTING											
Lab. :		KAP											
Reviewer :													
Date :													
Sample Number :	USEPA	USEPA	E0066	E0080	E0081	E0070	E0071	E0084					
Sampling Location :	Primary	SCDM	G101	G102	G103	TB101	FB101	TB102					
Matrix :	Drinking	Benchmarks	Water	Water	Water	Water	Water	Water					
Units :	Water	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L					
Date Sampled :	Standard		4/22/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008	4/24/2008					
Screen Exposed :	MCL's		24' - 28'	20' - 24'	20' - 24'								
%Moisture :	ug/L		N/A	N/A	N/A	N/A	N/A	N/A					
pH :			2	2	2	2	2	2					
Dilution Factor :			1.0	1.0	1.0	1.0	1.0	1.0					
Volatil Compound			Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result
Dichlorodifluoromethane			5.0	U	5.0	UJ	5.0	UJ	5.0	U	5.0	U	5.0
Chloromethane			5.0	U	5.0	UJ	5.0	UJ	5.0	U	5.0	U	5.0
Vinyl chloride			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromomethane			5.0	U	5.0	UJ	5.0	UJ	5.0	U	5.0	U	5.0
Chloroethane			5.0	U	5.0	UJ	5.0	UJ	5.0	U	5.0	U	5.0
Trichlorofluoromethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1-Dichloroethene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,2-Trichloro-1,2,2-trifluoroethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Acetone			10	U	10	U	10	U	10	U	10	U	10
Carbon disulfide			5.0	U	5.0	UJ	5.0	UJ	5.0	U	5.0	U	5.0
Methyl acetate			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Methylene chloride			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
trans-1,2-Dichloroethene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Methyl tert-butyl ether			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1-Dichloroethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
cis-1,2-Dichloroethene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
2-Butanone			10	U	10	U	10	U	10	U	10	U	10
Bromochloromethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chloroform			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,1-Trichloroethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Cyclohexane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Carbon tetrachloride			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Benzene	5	1.5	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2-Dichloroethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,4-Dioxane			100	U	100	U	100	U	100	U	100	U	100
Trichloroethene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Methylcyclohexane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2-Dichloropropane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromodichloromethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
cis-1,3-Dichloropropene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
4-Methyl-2-pentanone			10	U	10	U	10	U	10	U	10	U	10
Toluene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
trans-1,3-Dichloropropene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,2-Trichloroethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Tetrachloroethene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
2-Hexanone			10	U	10	U	10	U	10	U	10	U	10
Dibromochloromethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2-Dibromoethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chlorobenzene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Ethylbenzene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
o-Xylene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
m,p-Xylene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Styrene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromoform			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Isopropylbenzene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,2,2-Tetrachloroethane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,3-Dichlorobenzene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,4-Dichlorobenzene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2-Dichlorobenzene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2-Dibromo-3-chloropropane			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2,4-Trichlorobenzene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2,3-Trichlorobenzene			5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0

Values highlighted in RED exceed corresponding MCL benchmark.

Values highlighted in VIOLET exceed corresponding MCL and SCDM benchmark.



**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 3

Analytical Results (Qualified Data)									
Case #: 37407		SDG: E0066							
Site:		LAKE CALUMET SMELTING							
Lab.:		KAP							
Reviewer:									
Date:									
Sample Number:	USEPA	E0066	E0080	E0081	E0071				
Sampling Location:	Primary	G101	G102	G103	FB101				
Matrix:	Drinking	Water	Water	Water	Water				
Units:	Water	ug/L	ug/L	ug/L	ug/L				
Date Sampled:	Standard	4/22/2008	4/23/2008	4/23/2008	4/23/2008				
Screen Exposed:	MCL's	24" - 28"	20" - 24"	20" - 24"					
%Moisture:	(ug/L)	N/A	N/A	N/A	N/A				
pH:		5.8	5.6	6.6	6.1				
Dilution Factor:		1.0	1.0	1.0	1.0				
Semivolatile Compound		Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde		5.0	U	5.0	U	5.0	U	5.0	U
Phenol		5.0	U	5.0	U	5.0	U	5.0	U
Bis(2-chloroethyl)ether		5.0	U	5.0	U	5.0	U	5.0	U
2-Chlorophenol		5.0	U	5.0	U	5.0	U	5.0	U
2-Methylphenol		5.0	U	5.0	U	5.0	U	5.0	U
2,2'-Oxybis(1-chloropropane)		5.0	U	5.0	U	5.0	U	5.0	U
Acetophenone		5.0	U	5.0	U	5.0	U	5.0	U
4-Methylphenol		5.0	U	5.0	U	5.0	U	5.0	U
N-Nitroso-di-n-propylamine		5.0	U	5.0	U	5.0	U	5.0	U
Hexachloroethane		5.0	U	5.0	U	5.0	U	5.0	U
Nitrobenzene		5.0	U	5.0	U	5.0	U	5.0	U
Isophorone		5.0	U	5.0	U	5.0	U	5.0	U
2-Nitrophenol		5.0	U	5.0	U	5.0	U	5.0	U
2,4-Dimethylphenol		5.0	U	5.0	U	5.0	U	5.0	U
Bis(2-chloroethoxy)methane		5.0	U	5.0	U	5.0	U	5.0	U
2,4-Dichlorophenol		5.0	U	5.0	U	5.0	U	5.0	U
Naphthalene		5.0	U	9.4	U	9.2	U	5.0	U
4-Chloroaniline		5.0	U	5.0	U	5.0	U	5.0	U
Hexachlorobutadiene		5.0	U	5.0	U	5.0	U	5.0	U
Caprolactam		5.0	U	5.0	U	5.0	U	5.0	U
4-Chloro-3-methylphenol		5.0	U	5.0	U	5.0	U	5.0	U
2-Methylnaphthalene		5.0	U	5.0	U	5.0	U	5.0	U
Hexachlorocyclopentadiene		5.0	U	5.0	U	5.0	U	5.0	U
2,4,6-Trichlorophenol		5.0	U	5.0	U	5.0	U	5.0	U
2,4,5-Trichlorophenol		5.0	U	5.0	U	5.0	U	5.0	U
1,1'-Biphenyl		5.0	U	5.0	U	5.0	U	5.0	U
2-Chloronaphthalene		5.0	U	5.0	U	5.0	U	5.0	U
2-Nitroaniline		10	U	10	U	10	U	10	U
Dimethylphthalate		5.0	U	5.0	U	5.0	U	5.0	U
2,6-Dinitrotoluene		5.0	U	5.0	U	5.0	U	5.0	U
Acenaphthylene		5.0	U	5.0	U	5.0	U	5.0	U
3-Nitroaniline		10	U	10	U	10	U	10	U
Acenaphthene		5.0	U	5.0	U	5.0	U	5.0	U
2,4-Dinitrophenol		10	U	10	U	10	U	10	U
4-Nitrophenol		10	U	10	U	10	U	10	U
Dibenzofuran		5.0	U	5.0	U	5.0	U	5.0	U
2,4-Dinitrotoluene		5.0	U	5.0	U	5.0	U	5.0	U
Diethylphthalate		5.0	U	5.0	U	5.0	U	5.0	U
Fluorene		5.0	U	5.0	U	5.0	U	5.0	U
4-Chlorophenyl-phenylether		5.0	U	5.0	U	5.0	U	5.0	U
4-Nitroaniline		10	U	10	U	10	U	10	U
4,6-Dinitro-2-methylphenol		10	U	10	U	10	U	10	U
N-Nitrosodiphenylamine		5.0	U	5.0	U	5.0	U	5.0	U
1,2,4,5-Tetrachlorobenzene		5.0	U	5.0	U	5.0	U	5.0	U
4-Bromophenyl-phenylether		5.0	U	5.0	U	5.0	U	5.0	U
Hexachlorobenzene		5.0	U	5.0	U	5.0	U	5.0	U
Atrazine		5.0	U	5.0	U	5.0	U	5.0	U
Pentachlorophenol		10	U	10	U	10	U	10	U
Phenanthrene		5.0	U	5.0	U	5.0	U	5.0	U
Anthracene		5.0	U	5.0	U	5.0	U	5.0	U
Carbazole		5.0	U	5.0	U	5.0	U	5.0	U
Di-n-butylphthalate		5.0	U	5.0	U	5.0	U	5.0	U
Fluoranthene		5.0	UJ	5.0	U	5.0	U	5.0	U
Pyrene		5.0	UJ	5.0	U	5.0	U	5.0	U
Butylbenzylphthalate		5.0	U	5.0	U	5.0	U	5.0	U
3,3'-Dichlorobenzidine		5.0	U	5.0	U	5.0	U	5.0	U
Benzo(a)anthracene		5.0	UJ	5.0	U	5.0	U	5.0	U
Chrysene		5.0	UJ	5.0	U	5.0	U	5.0	U
Bis(2-ethylhexyl)phthalate		5.0	U	5.0	U	5.0	U	5.0	U
Di-n-octylphthalate		5.0	U	5.0	U	5.0	U	5.0	U
Benzo(b)fluoranthene		5.0	U	5.0	U	5.0	U	5.0	U
Benzo(k)fluoranthene		5.0	U	5.0	U	5.0	U	5.0	U
Benzo(a)pyrene		5.0	U	5.0	U	5.0	U	5.0	U
Indeno(1,2,3-cd)pyrene		5.0	U	5.0	U	5.0	U	5.0	U
Dibenzo(a,h)anthracene		5.0	U	5.0	U	5.0	U	5.0	U
Benzo(g,h,i)perylene		5.0	U	5.0	U	5.0	U	5.0	U
2,3,4,6-Tetrachlorophenol		5.0	U	5.0	U	5.0	U	5.0	U

-- Standard not established.

Values highlighted in GREEN are concentrations detected above sample detection limits.

# LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 3

Analytical Results (Qualified Data)									
Case #: 37407		SDG : E0066							
Site :		LAKE CALUMET SMELTING							
Lab. :		KAP							
Reviewer :									
Date :									
Sample Number :	USEPA	E0066		E0080		E0081		E0071	
Sampling Location :	Primary	G101		G102		G103		FB101	
Matrix :	Drinking	Water		Water		Water		Water	
Units :	Water	ug/L		ug/L		ug/L		ug/L	
Date Sampled :	Standard	4/22/2008		4/23/2008		4/23/2008		4/23/2008	
Screen Exposed :	MCL's	24' - 28'		20' - 24'		20' - 24'			
%Moisture :	(ug/L)	N/A		N/A		N/A		N/A	
pH :		5.8		5.6		6.6		6.1	
Dilution Factor :		1.0		1.0		1.0		1.0	
Pesticide Compound		Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC		0.050	U	0.050	U	0.050	U	0.050	U
beta-BHC		0.050	U	0.050	U	0.050	U	0.050	U
delta-BHC		0.050	U	0.050	U	0.050	U	0.050	U
gamma-BHC (Lindane)		0.050	U	0.050	U	0.050	U	0.050	U
Heptachlor		0.050	U	0.050	U	0.050	U	0.050	U
Aldrin		0.050	U	0.050	U	0.050	U	0.050	U
Heptachlor epoxide		0.050	U	0.050	U	0.050	U	0.050	U
Endosulfan I		0.050	U	0.050	U	0.050	U	0.050	U
Dieldrin		0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDE		0.10	U	0.10	U	0.10	U	0.10	U
Endrin		0.10	U	0.10	U	0.10	U	0.10	U
Endosulfan II		0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDD		0.10	U	0.10	U	0.10	U	0.10	U
Endosulfan sulfate		0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDT		0.10	U	0.10	U	0.10	U	0.10	U
Methoxychlor		0.50	U	0.50	U	0.50	U	0.50	U
Endrin ketone		0.10	U	0.10	U	0.10	U	0.10	U
Endrin aldehyde		0.10	U	0.10	U	0.10	U	0.10	U
alpha-Chlordane		0.050	U	0.050	U	0.050	U	0.050	U
gamma-Chlordane		0.050	U	0.050	U	0.050	U	0.050	U
Toxaphene		5.0	U	5.0	U	5.0	U	5.0	U



# LAKE CALUMET SMELTING

Lake Calumet, Illinois

TABLE 3

<b>Analytical Results (Qualified Data)</b>									
Case #: 37407		SDG : E0066							
Site :		LAKE CALUMET SMELTING							
Lab. :		KAP							
Reviewer :									
Date :									
Sample Number :	USEPA	E0066		E0080		E0081		E0071	
Sampling Location :	Primary	G101		G102		G103		FB101	
Matrix :	Drinking	Water		Water		Water		Water	
Units :	Water	ug/L		ug/L		ug/L		ug/L	
Date Sampled :	Standard	4/22/2008		4/23/2008		4/23/2008		4/23/2008	
Screen Exposed :	MCL's	24' - 28'		20' - 24'		20' - 24'			
%Moisture :	(ug/L)	N/A		N/A		N/A		N/A	
pH :		5.8		5.6		6.6		6.1	
Dilution Factor :		1.0		1.0		1.0		1.0	
ANALYTE		Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016		1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1221		1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1232		1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1242		1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1248		1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1254		1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1260		1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1262		1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1268		1.0	U	1.0	U	1.0	U	1.0	U

**LAKE CALUMET SMELTING**  
Lake Calumet, Illinois

TABLE 3

Analytical Results (Qualified Data)									
Case #: 37407      SDG : ME0066									
Site :      LAKE CALUMET SMELTING									
Lab :      CHEM									
Reviewer :									
Date :									
Sample Number :	USEPA Primary Drinking Water Standard MCL's ug/L	USEPA SCDM Benchmarks ug/L	ME0066 G101 Water ug/L	ME0069 G101F Water ug/L	ME0080 G102 Water ug/L	ME0085 G102 F Water ug/L	ME0081 G103 Water ug/L	ME0086 G103 F Water ug/L	ME0071 FB101 Water ug/L
Sampling Location :			4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/23/2008
Matrix :			24' - 28'	24' - 28'	20' - 24'	20' - 24'	20' - 24'	20' - 24'	
Units :			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date Sampled :			0.0	0.0	0.0	0.0	0.0	0.0	0.0
Screen Exposed :			5.8	5.8	5.6	5.6	6.6	6.6	6.1
%Solids :			1.0	1.0	1.0	1.0	1.0	1.0	1.0
pH :									
Dilution Factor :									
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result
ALUMINUM	142	J	200	U	364	J	65.4	J	368
ANTIMONY	6	15	60.0	U	60.0	U	10.5	J	60.0
ARSENIC	50	0.057	7.3	J	17.0	U	16.0	J	11.5
BARIUM	2000	2600	29300	J	52.0	J	25.6	J	53.0
BERYLLIUM	4	18	5.0	U	5.0	U	0.37	J	0.36
CADMIUM	5	18	1.8	J	1.7	J	5.0	U	23.0
CALCIUM	2150000	184000	23.5	J	30.2	J	10.0	U	199000
CHROMIUM	100	110	2.5	J	4.3	J	4.3	J	7.1
COBALT	1300	5000	50.0	U	7.9	J	9.9	J	10.0
COPPER	5000	7.5	277000	J	10.0	J	25.0	U	13.3
IRON	150	5100	1560	J	13500	J	13800	J	14800
LEAD	2	11	0.075	J	30.2	J	10.0	U	33.5
MAGNESIUM	100	730	287000	J	7.7	J	36700	J	36400
MANGANESE	50	180	35.0	UJ	178000	J	295	J	300
MERCURY	50	180	10.0	UJ	1510	J	0.20	U	0.065
NICKEL	2	11	0.075	J	279	J	33.5	J	32.6
POTASSIUM	100	730	287000	J	32.4	J	34800	J	34000
SELENIUM	50	180	35.0	UJ	33600	J	35.0	UJ	35.0
SILVER	50	180	10.0	UJ	10.0	UJ	10.0	UJ	10.0
SODIUM	2	11	921000	J	69100	J	74200	J	72800
THALLIUM	2	11	25.0	U	25.0	U	25.0	U	25.0
VANADIUM	5000	11,000	50.0	U	50.0	U	50.0	U	50.0
ZINC	200	730	489	J	18500	J	20600	J	21900
CYANIDE	200	730	10.0	U	10.0	U	10.0	U	10.0

-- Standard not established.

Values highlighted in RED exceed corresponding MCL benchmark.

Values highlighted in GREEN exceed corresponding SCDM benchmark.

Values highlighted in VIOLET exceed corresponding MCL and SCDM benchmarks.



**LAKE CALUMET SMELTING**  
**SOIL & SEDIMENT SAMPLE DESCRIPTIONS**  
**TABLE 4**

SAMPLE	DEPTH	APPEARANCE	TVA READINGS (units) *		LOCATION
			PID	FID	
X101	3.0" - 12.0"	Med. grey silty loam, fill, crushed brick, sinders & slag.	Ambient @ 0.03	Ambient @ 2.4	In northwest corner of property.
X102	3.0" - 12.0"	Fill - glass, cinders, & crushed brick	Ambient	Ambient	Central west side of property.
X103 T101	6" - 12" 6" - 8"	Fill - glass, cinders, crushed brick, slag of various colors, & auto fluff.	Ambient	Ambient	Southwest corner of property.
X104	6" - 18"	Fill - glass, cinders, crushed brick, slag of various colors, & auto fluff.	Ambient	23 @ 7.5'	Central south side of property.
X105	13' - 14'	Fill as above. Beginning of mottled med. grey - orangish tan silty clay at 14'.	Ambient	Ambient	Central south side of property.
X106 T102	6" - 14" 6"	Fill - glass, cinders, crushed brick & slag.	Ambient	Ambient	In southwest corner of fenced portion of the property.
X107	6" - 14"	Fill - glass, cinders, crushed brick & slag.	Ambient	Ambient	Central northwest portion of the fenced portion of the property.
X108 T103	6" - 14"	Fill - glass, cinders, crushed brick & slag.	Ambient	Ambient	Southwest central portion of the fenced portion of the property.
X109 X110 (Dup. of X109)	6" - 14"	Fill - glass, cinders, crushed brick & slag.	Ambient	Ambient	At central south portion of the fenced portion of the property.
X111 T104	6" - 10"	Fill - glass, cinders, crushed brick & slag.	6 @ 6"	Ambient	Near southeast corner of former building foundation/floor in SE corner of fenced portion of property.
X112	8.5' - 9'	Mottled med. tan - orangish tan silty clay.	Ambient	Ambient	Same as above
X501 T105	Surface	Light grey powder material spilled from poly drum laying on it's side.	Ambient	Ambient	Near southeast corner of former building foundation/floor in SE corner of fenced portion of property.
X113	6" - 14"	Fill - glass, cinders, crushed brick & slag.	Ambient	Ambient	Central east portion of the fenced portion of the property.
X114 T106 T107 (Dup. of T106)	6" - 12"	Olive green clay, firm - soft. Wet. Slight odor of old petroleum.	Ambient	15 @ 7.5'	In NE corner of property. At NE corner of former building foundation. Near water runoff outlet .
X115	8' - 9'	Mottled Lt tan - orangish tan silty clay.	Ambient	Ambient	Same location as X114.
X116 T108	Surface - 8"	Lt. - med brn. loose sandy, silty loam.	Ambient	Ambient	Central east portion of the fenced portion of the property, approx. 8' west of the facility smoke stack.

**LAKE CALUMET SMELTING**  
**SOIL & SEDIMENT SAMPLE DESCRIPTIONS**  
**TABLE 4**  
(CONT.)

SAMPLE	DEPTH	APPEARANCE	TVA PID	READINGS (units) * FID	LOCATION
X117	Surface - 8"	Dk brown - black sandy, silty loam with phragmites growing in this soil.	Ambient	Ambient	Central north portion of the fenced portion of the property, near north fenceline.
X118 (Background)	6" - 12"	Fill - glass, cinders, crushed brick & slag.	Ambient	Ambient	Approx. 500' north of the property along the east side of Champlain Ave.
X119 (Background)	7' - 8'	mottled Lt. grey - olive - orangish brn, silty clay. Soft, moist, plastic.	Ambient	Ambient	Same location as X118.
X120 T109	6" - 14"	Fill - glass, cinders, crushed brick & slag.	Ambient	Ambient	Approx. 150' east of the property at rear of Boasso America, in the tank yard.
X121	6" - 14"	Fill - glass, cinders, crushed brick & slag.	Ambient	Ambient	Approx. 150' NNW of the SE corner of the property.
X122 (Background) X123 (Dup. of X122)	6" - 14"	Fill - glass, cinders, crushed brick, Fine sand, fine gravel & slag.	Ambient	Ambient	Approx. 500' south of the property in the drainage ditch on the east side of the railroad tracks.
X124	6" - 14"	Fill - glass, cinders, crushed brick, Fine sand, fine gravel & slag.	Ambient	Ambient	Approx. 350' south of the SE corner of the property and approx. 100' N. of the NW corner of PSC Container Services.
X125	7' - 8'	Mottled med. tan - orangish tan silty clay.	Ambient	Ambient	Same location as X124
X201	Surface - 12"	Soft med. brn - reddish brn. silty soil matrix, w/ some gravel and sand evident. Phragmites present.	N/A	N/A	Sediment surface beneath 12" of water at beginning of drainage route flowing at NE corner of former bldg foundation on the property.
X202 (Background) X203 (Dup of X202)	Surface - 12"	Dk brown - black sandy, peaty, soil matrix. Some crushed brick & slag evident at 8". Phragmites present.	N/A	N/A	Sediment surface at approx. 150' east of NW corner of fenced portion of property, immediately north of north fenceline, in off site drainage ditch.
X204	Surface - 8"	Soft med. brn - reddish brn. silty soil matrix, w/ some gravel and sand evident. Phragmites present.	N/A	N/A	Sediment surface just off site and north of X201, in drainage ditch north of north property fence. Approx. 1/4 inch of standing water at location.
X205	Surface - 8"	Soft med. brn - reddish brn. silty soil matrix, w/ some gravel and sand evident.	N/A	N/A	Approximately 560 feet east of the NE corner of the fenced portion of the property, in off site drainage ditch.



**LAKE CALUMET SMELTING COMPANY**

Chicago, Illinois

**XRF Screening Data**

**TABLE B - 1**

XRF Reading Number	USEPA Residential RAL's (mg/kg)***	166	167	168	169**	170	171	172*	173	174	175
Matrix Units Date		Soil mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Powder mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Concrete mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Soil mg/kg 8/10/2004
ANALYTE		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Lead	400	768,000	189,000	72100	Above	88,600	7480	36,100	16,200	49,000	210,000
Zinc	230000	146,000	73,700	21,200	XRF	44,100	5110	30,400	10,200	22,800	133,000
Arsenic	230	36,300	6190	2160	Limits	1800	468	<LOD	521	1520	7420

- All XRF samples of the soil were collected from the soil surface. XRF sample collected on concrete floor surface was formerly within a building.

- \* Indicates screening was done on a concrete floor covered with various material.

- \*\*Indicates screening was of grey powder material spilled onto the soil surface from a poly drum.

- \*\*\*Residential RALs are being used for comparison due to the facilities proximity to residential neighborhoods.

-<LOD = Less than limit of detection.

- Red highlighted results are above RAL's.

**LAKE CALUMET SMELTING COMPANY**

Chicago, Illinois

**XRF Screening Data**

**TABLE B - 2**

XRF Reading Number	USEPA Ind/Comm RAL's (mg/kg)***	166	167	168	169**	170	171	172*	173	174	175
Matrix Units Date		Soil mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Powder mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Concrete mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Soil mg/kg 8/10/2004	Soil mg/kg 8/10/2004
ANALYTE		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Lead	1000	768,000	189,000	72100	Above	88,600	7480	36,100	16,200	49,000	210,000
Zinc	1000000	146,000	73,700	21,200	XRF	44,100	5110	30,400	10,200	22,800	133,000
Arsenic	6100	36,300	6190	2160	Limits	1800	468	<LOD	521	1520	7420

- All XRF samples of the soil were collected from the soil surface. XRF sample collected on concrete floor surface was formerly within a building.

- \* Indicates screening was done on a concrete floor covered with various material.

- \*\*Indicates screening was of grey powder material spilled onto the soil surface from a poly drum.

- \*\*\*Industrial/commercial RALs are being used for comparison due to the facilities location in an industrial setting.

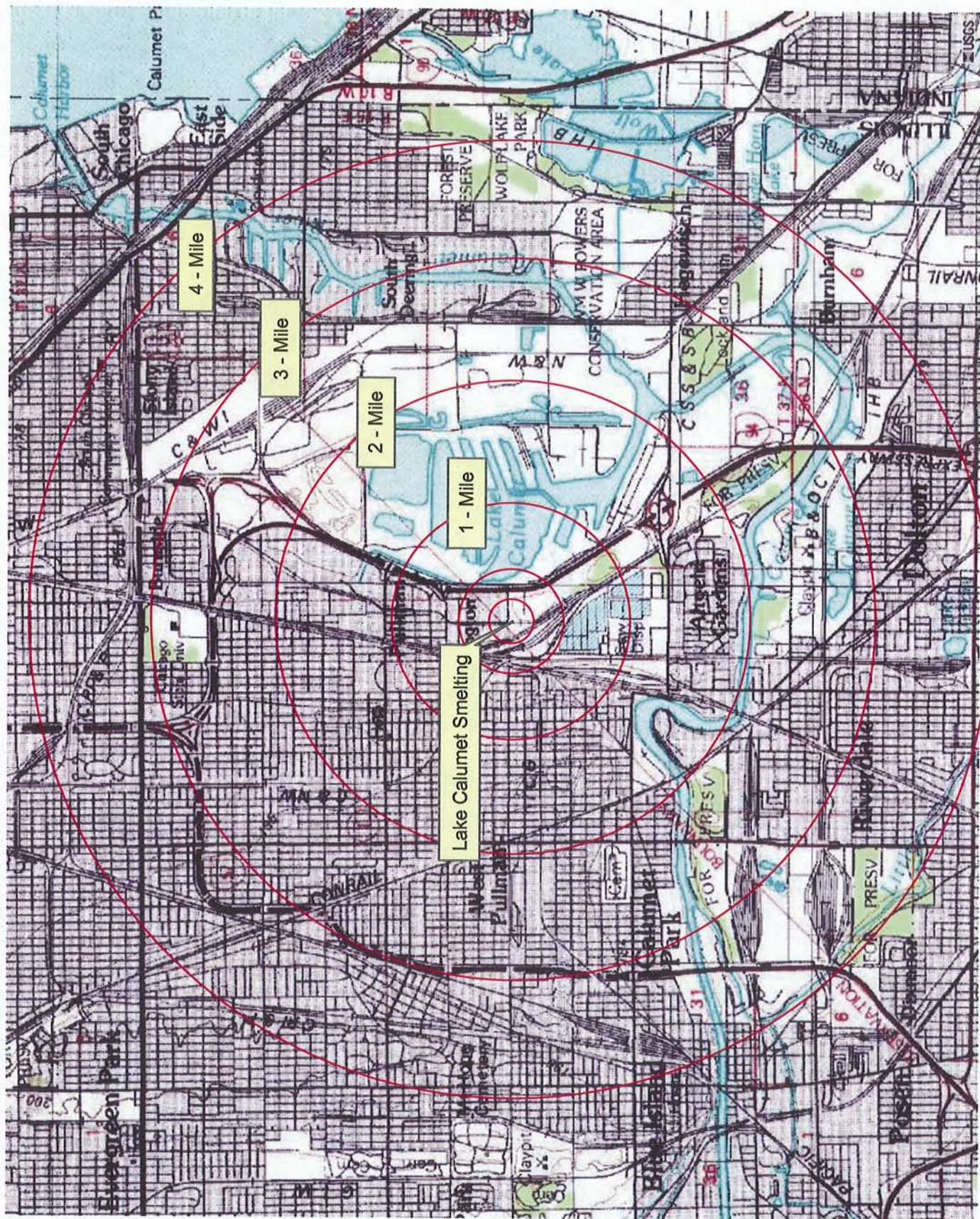
-<LOD = Less than limit of detection.

- Red highlighted results are above RAL's.

## **APPENDIX A**

### **4 – Mile Radius Map**





4 Mile Radius Map



## **APPENDIX B**

Sanborn Fire Insurance Maps  
1897, 1936 – 1950



1897  
SANBORN FIRE INSURANCE MAP

1936 – 1950  
SANBORN FIRE INSURANCE MAP



## APPENDIX C

### Target Compound List

## TARGET COMPOUND LIST

### **Volatile Target Compounds**

Chloromethane	1,2-Dichloropropane
Bromomethane	cis-1,3-Dichloropropene
Vinyl Chloride	Trichloroethene
Chloroethane	Dibromochloromethane
Methylene Chloride	1,1,2-Trichloroethane
Acetone	Benzene
Carbon Disulfide	trans-1,3-Dichloropropene
1,1-Dichloroethene	Bromoform
1,1-Dichloroethane	4-Methyl-2-pentanone
1,2-Dichloroethene (total)	2-Hexanone
Chloroform	Tetrachloroethene
1,2-Dichloroethane	1,1,2,2-Tetrachloroethane
2-Butanone	Toluene
1,1,1-Trichloroethane	Chlorobenzene
Carbon Tetrachloride	Ethylbenzene
Vinyl Acetate	Styrene
Bromodichloromethane	Xylenes (total)



### Base/Neutral Target Compounds

Hexachloroethane	2,4-Dinitrotoluene
bis(2-Chloroethyl) Ether	Diethylphthalate
Benzyl Alcohol	N-Nitrosodiphenylamine
bis (2-Chloroisopropyl) Ether	Hexachlorobenzene
N-Nitroso-Di-n-Propylamine	Phenanthrene
Nitrobenzene	4-Bromophenyl-phenylether
Hexachlorobutadiene	Anthracene
2-Methylnaphthalene	Di-n-Butylphthalate
1,2,4-Trichlorobenzene	Fluoranthene
Isophorone	Pyrene
Naphthalene	Butylbenzylphthalate
4-Chloroaniline	bis(2-Ethylhexyl)Phthalate
bis(2-chloroethoxy)Methane	Chrysene
Hexachlorocyclopentadiene	Benzo(a)Anthracene
2-Chloronaphthalene	3-3'-Dichlorobenzidene
2-Nitroaniline	Di-n-Octyl Phthalate
Acenaphthylene	Benzo(b)Fluoranthene
3-Nitroaniline	Benzo(k)Fluoranthene
Acenaphthene	Benzo(a)Pyrene
Dibenzofuran	Ideno(1,2,3-cd)Pyrene
Dimethyl Phthalate	Dibenz(a,h)Anthracene
2,6-Dinitrotoluene	Benzo(g,h,i)Perylene
Fluorene	1,2-Dichlorobenzene
4-Nitroaniline	1,3-Dichlorobenzene
4-Chlorophenyl-phenylether	1,4-Dichlorobenzene

### Acid Target Compounds

Benzoic Acid	2,4,6-Trichlorophenol
Phenol	2,4,5-Trichlorophenol
2-Chlorophenol	4-Chloro-3-methylphenol
2-Nitrophenol	2,4-Dinitrophenol
2-Methylphenol	2-Methyl-4,6-dinitrophenol
2,4-Dimethylphenol	Pentachlorophenol
4-Methylphenol	4-Nitrophenol
2,4-Dichlorophenol	



### Pesticide/PCB Target Compounds

alpha-BHC	Endrin Ketone
beta-BHC	Endosulfan Sulfate
delta-BHC	Methoxychlor
gamma-BHC (Lindane)	alpha-Chlordane
Heptachlor	gamma-Chlordane
Aldrin	Toxaphene
Heptachlor epoxide	Aroclor-1016
Endosulfan I	Aroclor-1221
4,4'-DDE	Aroclor-1232
Dieldrin	Aroclor-1242
Endrin	Aroclor-1248
4,4'-DDD	Aroclor-1254
Endosulfan II	Aroclor-1260
4,4'-DDT	

### Inorganic Target Compounds

Aluminum	Manganese
Antimony	Mercury
Arsenic	Nickel
Barium	Potassium
Beryllium	Selenium
Cadmium	Silver
Calcium	Sodium
Chromium	Thallium
Cobolt	Vanadium
Copper	Zinc
Iron	Cyanide
Lead	Sulfide
Magnesium	



## APPENDIX D

IEPA 4/21 – 24/2008 Sample Event Photographs

## APPENDIX E

SI Analytical Results  
(under separate cover in Volume 2 of the Report)



LPC# 0310000000 Cook County  
Lake Calumet Smelting Company - Chicago  
ILN 000 509 228  
SF/HRS



# CERCLA Analytical Results



Prepared by:  
Office of Site Evaluation  
Division of Remediation Management  
Bureau of Land

ESAT Controlled Number: ESAT 5.17.00074 - pd 25 June 08

DATE: June 25, 2008

IEPA

Attn: Mr. Mark Wagner

1001 North Grand Avenue East

P.O. Box 19276

Springfield, IL 62794-9276

VOC, SVOC, PEST,  
PCB

X101 - X119

X201

SITE NAME: Lake Calumet Smelting & Refining (IL)

<u>Case</u>	<u>Lab</u>	<u>Samples</u>	<u>SDG</u>	<u>Matrix</u>
37407	KAP Technologies	20	E0047	soil

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

**Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.**

Data Received by: \_\_\_\_\_ Date: \_\_\_\_\_

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

Received by Data Management Coordinator, CRL for file.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

FROM: **U.S. EPA - Region 5**  
Sylvia Griffin  
Central Regional Laboratory  
536 S. Clark, 10th Floor  
Chicago, IL 60605

Sent By: Pat Johnson  
Data Coordinator  
ESAT Region 5 **TechLaw**

**RECEIVED**

JUN 30 2008

IEPA-BOL-FSRS



# Controlled Document

# ESAT5.16.00042

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
SUPERFUND DIVISION

*act*  
6-25-08

DATE:

SUBJECT: Review of Data  
Received for Review on: May 19, 2008

FROM: Stephen L. Ostrodka, Chief (SRT-4J)  
Superfund Field Services Section

*for Steve Ostrodka*  
*Richard L Byrns*  
*6/23/08*

TO: Data User: IEPA

We have reviewed the data for the following case:

Site Name: Lake Calumet Smelting & Refining (IL)

Case Number: 37407 SDG Number: E0047

Number and Type of Samples: 20 Soils (low level VOA, SVOA, pesticides, aroclors)

Sample Numbers: E0047 - E0058, E0060 - E0062, E0064, E0065, E0067, E0072, E0073

Laboratory: KAP Technologies, Inc. Hrs for Review:

Following are our findings:

*All data are useable and acceptable with the qualification described in the attached narrative.*  
*Richard L Byrns*

CC: Howard Pham  
Region 5 TPO  
Mail Code: SRT-4J

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

Page 2 of 17  
SDG Number: E0047  
Laboratory: KAP Technologies, Inc.

**Below is a summary of the out-of-control audits and the possible effects on the data for this case:**

Twenty (20) preserved soil samples labeled E0047 - E0058, E0060 - E0062, E0064, E0065, E0067, E0072 and E0073 were shipped to KAP Technologies, Inc. located in Woodland, Texas. All twenty (20) soil samples were collected on April 21, 2008 through April 23, 2008 and received on April 22, 2008 through April 24, 2008 intact and properly cooled.

All samples were analyzed for the low level volatile, semivolatile, pesticide and aroclor target compounds. All samples were analyzed according to CLP SOW SOM01.2 and reviewed according to the NFG for SOM01.1 and the SOP for ESAT 5/TechLaw Validation of Contract Laboratory Program Organic Data (Version 2.1).

Sample E0057 was designated by the samplers to be used for laboratory matrix spike / matrix spike duplicate analyses. Sample E0057 was used for laboratory matrix spike / matrix spike duplicate for the low level volatile, SVOA and pesticide analyses. Sample E0050 was used for laboratory matrix spike / matrix spike duplicate for the aroclor analysis.

No samples were identified as field blanks or field duplicates.



Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0047  
Laboratory: KAP Technologies, Inc.

### 1. HOLDING TIME

No problems were found.

### 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems were found.

### 3. CALIBRATION

The following low level volatile samples are associated with an opening CCV with relative response factors (RRF50) outside criteria. The compound was not detected in any of the samples. The non-detected compound is qualified "R".

#### 1,4-Dioxane

E0047RE, E0048RE, E0052RE, E0054, E0055, E0056, E0057MS, E0057MSD, E0062, E0064, E0065, VBLKAD

The following low level volatile samples are associated with an initial calibration with a percent relative standard deviation (%RSD) that exceeded the criteria of 20%. Detected Bromomethane in VBLKAB, VBLKAD, VBLKAH is qualified "J". The non-detected compound is qualified "UJ".

#### Bromomethane

E0047, E0047RE, E0048, E0048RE, E0049, E0050, E0051, E0052, E0052RE, E0053, E0054, E0055, E0056, E0057, E0057MS, E0057MSD, E0058, E0060, E0061, E0062, E0064, E0065, E0067, E0072, E0072RE, E0073, VBLKAB, VBLKAD, VBLKAF, VBLKAH, VHBLK01

The following low level volatile samples are associated with an opening and/or closing CCVs in which a DMC did not meet relative response factor (RRF50) criteria. Sample results are not qualified based on the DMC %RSD or RRF data alone.

#### 1,4-Dioxane-d<sub>8</sub>

E0047, E0047RE, E0048, E0048RE, E0049, E0050, E0051, E0052, E0052RE, E0053, E0054, E0055, E0056, E0057, E0057MS, E0057MSD, E0058, E0062, E0064, E0065, E0072RE, VBLKAB, VBLKAD, VBLKAH, VHBLK01

The following semivolatile samples are associated with an initial calibration with relative response factors (RRFs) outside criteria. The compound was not detected in any of the samples. The non-detected compound is qualified "R".

#### Pentachlorophenol

E0047, E0050, E0053, E0072, E0073, SBLK72

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0047  
Laboratory: KAP Technologies, Inc.

The following semivolatile samples are associated with an initial calibration with a percent relative standard deviation (%RSD) that exceeded the criteria of 20%. The compound was not detected in any of the samples. The non-detected compounds is qualified "R" because of very low RRF.

Pentachlorophenol  
E0047, E0050, E0053, E0072, E0073, SBLK72

The following semivolatile samples are associated with an opening CCV percent difference (%D) greater than 25%. Detected N-Nitroso-di-n-propylamine in samples E0057MS and E0057MSD is qualified "J". The non-detected compound is qualified "UJ".

N-Nitroso-di-n-propylamine  
E0055, E0056, E0057, E0057MS, E0057MSD

The following semivolatile samples are associated with an opening CCV in which a DMC exceeded percent difference (%D) criteria. Detected and non-detected compounds are not qualified based on the %D data of the DMC alone.

Phenol-d<sub>5</sub>  
E0054, E0055, E0056, E0057, E0057MS, E0057MSD, E0058, E0060, E0061,  
E0062, E0064, E0065, E0067

#### 4. BLANKS

The following low level volatile samples have common contaminant analyte concentrations reported less than the CRQL. The associated method blank concentration has common contaminant analyte concentration less than 2X the CRQL. Detected compounds are qualified "U". Detected Methylene chloride in samples E0047 (low IS recoveries) and E0047RE (low surrogate recoveries) are qualified "UJ". Non-detected compounds are not qualified. Reported sample concentrations have been elevated to the CRQL.

Acetone  
E0048, E0048RE, E0051, E0053, E0058, E0064, E0065

Methylene chloride  
E0047, E0047RE, E0048, E0049, E0050, E0051, E0052, E0053, E0057, E0057MS,  
E0058, E0064, E0065, E0072RE

The following low level volatile samples have common contaminant analyte concentrations reported greater than the CRQL and less than 10X the method blank concentration. The associated method blank concentration has common contaminant analyte concentration less than 2X the CRQL. Detected compounds are qualified "U". Non-detected compounds are not qualified. Sample concentrations have been reported as the adjusted CRQL.



Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0047  
Laboratory: KAP Technologies, Inc.

Methylene chloride  
E0048RE, E0052RE, E0062

The following volatile samples have analyte concentrations reported less than the CRQL. The associated method blank concentration has analyte concentration less than the CRQL. Detected compounds are qualified "U". Detected Bromomethane in VHBLK01 is qualified "UJ" because all calibration criteria were not met. Non-detected compounds are not qualified. Reported sample concentrations have been elevated to the CRQL.

1,3-Dichlorobenzene  
E0062

Toluene  
E0072RE

Bromomethane  
VHBLK01

The following low level volatile samples have TIC concentrations reported less than 5X the method blank concentration. Detected compounds are qualified "U" and deleted from the TIC report.

E0047, E0047RE, E0048, E0048RE, E0049, E0050, E0051, E0052, E0052RE, E0053, E0054, E0055, E0056, E0057, E0058, E0060, E0061, E0062, E0064, E0065, E0067, E0072, E0072RE, E0073, VHBLK01

The following low level volatile samples have common contaminant analyte concentrations reported less than the CRQL. The associated storage blank concentration has common contaminant analyte concentration less than 2X the CRQL. Detected compounds are qualified "U". Non-detected compounds are not qualified. Reported sample concentrations have been elevated to the CRQL.

Acetone  
E0060, E0061, E0067

The following semivolatile samples have analyte concentrations reported less than the CRQL. The associated method blank concentration has analyte concentration less than the CRQL. Detected compounds are qualified "U". Non-detected compounds are not qualified. The non-detected Benzo(a)pyrene in sample E0053 and Benzo(k)fluoranthene in sample E0067 are ultimately qualified "UJ" because these TCL compounds were reported as semivolatile TICs for the respective sample. The reported concentrations may be biased low. Reported sample concentrations have been elevated to the CRQL.

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0047  
Laboratory: KAP Technologies, Inc.

Benzo(a)anthracene

E0050, E0052, E0053, E0055, E0056, E0057, E0057MS, E0057MSD, E0060, E0064, E0065

Chrysene

E0047, E0050, E0052, E0053, E0055, E0056, E0060, E0064, E0065

Benzo(b)fluoranthene

E0047, E0050, E0051, E0052, E0055, E0056, E0060, E0064, E0065

Benzo(k)fluoranthene

E0050, E0052, E0055, E0056, E0057, E0057MS, E0057MSD, E0060, E0064, E0065, E0067

Benzo(a)pyrene

E0050, E0052, E0053, E0055, E0056, E0057MS, E0060, E0064, E0065

Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene  
E0072

The following semivolatile samples have analyte concentrations reported above the CRQL but less than 5X the CRQLs. The associated method blank concentration has contaminant analyte concentration less than the CRQL. Detected compounds are qualified "U". Non-detected compounds are not qualified. The non-detected Benzo(k)fluoranthene in sample E0049 is ultimately qualified "UJ" because the TCL compound was reported as a semivolatile TICs for the sample. The reported concentration may be biased low. Sample concentrations have been reported as the adjusted CRQL.

Benzo(a)anthracene

E0049, E0067

Chrysene, Benzo(b)fluoranthene

E0049, E0057, E0057MS, E0057MSD, E0067

Benzo(k)fluoranthene

E0049

Benzo(a)pyrene

E0049, E0057, E0057MSD, E0067

The following semivolatile samples have TIC concentrations reported less than 5X the method blank concentration. Detected compounds are qualified "U" and deleted from the TIC report.

E0049, E0051, E0052, E0054, E0055, E0056, E0058, E0060



Case Number: 37407

SDG Number: E0047

Site Name: Lake Calumet Smelting &amp; Refining (IL)

Laboratory: KAP Technologies, Inc.

## 5. DEUTERATED MONITORING COMPOUND AND SURROGATE RECOVERY

The following low level volatile samples have DMC/SMC recoveries above the upper limit of the criteria window. Detected compounds are qualified "J". Non-detected compounds are not qualified for this criterion. Non-detected Bromomethane is ultimately qualified "UJ" because all calibration criteria were not met. Some non-detected compounds are ultimately qualified "UJ" because all internal standards criteria were not met. Non-detected 1,4-Dioxane is ultimately qualified "R" because all calibration criteria were not met.

E0048, E0057MSD, E0072, E0072RE

Cyclohexane, Benzene, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Isopropylbenzene

E0048RE

Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Bromomethane, Chloroethane, Trichlorofluoromethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, Carbon disulfide, Methyl acetate, Methylene chloride, Methyl tert-butyl ether, 1,1-Dichloroethane, Bromochloromethane, Chloroform, 1,1,1-Trichloroethane, Cyclohexane, Carbon tetrachloride, Benzene, 1,2-Dichloroethane, 1,4-Dioxane, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, Toluene, Tetrachloroethene, Dibromochloromethane, 1,2-Dibromoethane, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Bromoform, Isopropylbenzene, 1,1,2,2-Tetrachloroethane, 1,2-Dibromo-3-chloropropane

E0052

Dichlorodifluoromethane, Chloromethane, Bromomethane, Chloroethane, Carbon Disulfide, Cyclohexane, Benzene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane

E0052RE

Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Bromomethane, Chloroethane, Carbon disulfide, 1,1-Dichloroethane, Bromochloromethane, Chloroform, Cyclohexane, Benzene, 1,4-Dioxane, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, Toluene, Tetrachloroethene, Dibromochloromethane, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Bromoform, Isopropylbenzene

E0056, E0057, E0057MS, E0061, E0062, E0065

Cyclohexane, Benzene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane

The following low level volatile samples have one or more DMC/SMC recovery values less than the primary lower limit but greater than or equal to 20%. Detected compounds are qualified "J". Non-detected compounds are qualified "UJ".

Reviewed by: Steffanie Tobin/Techlaw-ESAT

Date: June 20, 2008

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0047  
Laboratory: KAP Technologies, Inc.

E0047RE, E0060

Trichlorofluoromethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, Methyl Acetate,  
Methylene Chloride, Methyl tert-Butyl Ether, 1,1,1-Trichloroethane,  
Carbon Tetrachloride, 1,2-Dichloroethane, 1,2-Dibromoethane

E0054

Trichlorofluoromethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, Methyl acetate,  
Methylene chloride, Methyl tert-butyl ether, 1,1,1-Trichloroethane,  
Carbon tetrachloride, 1,2-Dichloroethane, cis-1,3-Dichloropropene,  
trans-1,3-Dichloropropene, 1,1,2-Trichloroethane, 1,2-Dibromoethane

The following semivolatile samples have DMC/SMC recoveries above the upper limit of the criteria window. Detected compounds are qualified "J". Non-detected compounds are not qualified.

E0054, E0055, E0056, E0057, E0057MS, E0058, E0064, E0067  
Benzaldehyde, Phenol

E0057MSD

Benzaldehyde, Phenol, 2-Methylphenol, 4-Methylphenol, 2,4-Dimethylphenol

The following semivolatile samples have deuterated monitoring compound recovery below the lower limit of the criteria window but greater than or equal to 0%. The compounds were not detected in the sample. The non-detected compounds are qualified "UJ".

E0062

Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene

The following pesticide sample has two or more surrogate recoveries greater than 150%. The compounds were not detected in the sample. The non-detected compounds are not qualified for this criterion.

E0073

The following pesticide samples have only one surrogate recovery value outside the acceptance criteria. Results are only qualified if two or more surrogate recoveries are outside the acceptance criteria. Detected and non-detected compounds are not qualified.

E0056, E0064

#### 6A. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample E0057 was designated by the samplers to be used for laboratory matrix spike / matrix spike duplicate analyses. Sample E0057 was used for laboratory matrix spike / matrix spike



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Laboratory: KAP Technologies, Inc.

duplicate for the low level volatile, SVOA and pesticide analyses. Sample E0050 was used for laboratory matrix spike / matrix spike duplicate for the aroclor analysis.

The following low level volatile matrix spike/matrix spike duplicate samples have percent recovery greater than the upper acceptance criteria. This compound was not detected in the unspiked sample, E0057. The non-detected compound in the unspiked sample, E0057, is not qualified for this criterion.

E0057MS  
Benzene

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery greater than the upper acceptance criteria and less than or equal to 100%. Detected and non-detected compounds in the unspiked sample, E0057, are not qualified for this criterion.

E0057MS  
2,4-Dinitrotoluene

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery greater than the upper acceptance criteria and less than or equal to 100%. The compound was not detected in the unspiked sample, E0057. Non-detected compound is not qualified.

E0057MS  
Phenol

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery greater than the upper acceptance criteria. These compounds were not detected in the unspiked sample, E0057. Non-detected compounds in the unspiked sample, E0057, are not qualified for this criterion.

E0057MSD  
Phenol

E0057MS, E0057MSD  
4-Chloro-3-methylphenol

The relative percent difference (RPD) between the following aroclor matrix spike and matrix spike duplicate recoveries is outside criteria on only 1 GC column. Detected and non-detected compounds are not qualified as the lower of the 2 possible values (i.e. the reported value) is within the acceptance range.

E0050MS, E0050MSD  
Aroclor-1016

## 6B. LABORATORY CONTROL SAMPLE

No problems were found.

## 7. FIELD BLANK AND FIELD DUPLICATE

No samples were identified as field blanks or field duplicates.

## 8. INTERNAL STANDARDS

The following low level volatile samples have internal standard area counts that are greater than the upper limit of the primary criteria. Detected compounds are qualified "J". Non-detected compounds are not qualified for this criterion.

### E0047RE

Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Bromomethane, Chloroethane, Trichlorofluoromethane, 1,1-Dichloroethene, 1,1,2-Trichloro-1,2,2-trifluoroethane, Acetone, Carbon disulfide, Methyl acetate, Methylene chloride, trans-1,2-Dichloroethene, Methyl tert-butyl ether, 1,1-Dichloroethane, cis-1,2-Dichloroethene, 2-Butanone, Bromochloromethane, Chloroform, 1,1,1-Trichloroethane, Cyclohexane, Carbon tetrachloride, Benzene, 1,2-Dichloroethane, 1,4-Dioxane, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, cis-1,3-Dichloropropene, 4-Methyl-2-pentanone, Toluene, trans-1,3-Dichloropropene, 1,1,2-Trichloroethane, Tetrachloroethene, 2-Hexanone, Dibromochloromethane, 1,2-Dibromoethane, Chlorobenzene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Bromoform, Isopropylbenzene, 1,1,2,2-Tetrachloroethane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

The following low level volatile samples have internal standard area counts that are less than the lower limit of the primary criteria but greater than 10% of the 12-hr standard area count. Detected compounds are qualified "J". Non-detected compounds are qualified "UJ".

### E0047

Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Bromomethane, Chloroethane, Trichlorofluoromethane, 1,1-Dichloroethene, 1,1,2-Trichloro-1,2,2-trifluoroethane, Acetone, Carbon disulfide, Methyl acetate, Methylene chloride, trans-1,2-Dichloroethene, Methyl tert-butyl ether, 1,1-Dichloroethane, cis-1,2-Dichloroethene, 2-Butanone, Bromochloromethane, Chloroform, 1,1,1-Trichloroethane, Cyclohexane, Carbon tetrachloride, Benzene, 1,2-Dichloroethane, 1,4-Dioxane, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, cis-1,3-Dichloropropene, 4-Methyl-2-pentanone, Toluene, trans-1,3-Dichloropropene, 1,1,2-Trichloroethane, Tetrachloroethene, 2-Hexanone, Dibromochloromethane, 1,2-Dibromoethane,



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Chlorobenzene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Bromoform, Isopropylbenzene, 1,1,2,2-Tetrachloroethane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

E0048, E0052, E0052RE, E0057, E0057MS, E0057MSD, E0072, E0072RE  
Bromoform, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

E0048RE

1,1,1-Trichloroethane, Cyclohexane, Carbon tetrachloride, Benzene, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, cis-1,3-Dichloropropene, 4-Methyl-2-pentanone, Toluene, trans-1,3-Dichloropropene, 1,1,2-Trichloroethane, Tetrachloroethene, 2-Hexanone, Dibromochloromethane, 1,2-Dibromoethane, Chlorobenzene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Bromoform, Isopropylbenzene, 1,1,2,2-Tetrachloroethane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

The following semivolatile samples have internal standard area counts that are greater than the upper limit of the primary criteria. Detected compounds are qualified "J". Non-detected compounds are not qualified for this criterion.

E0057, E0057MS, E0057MSD

Pyrene, Butylbenzophthalate, 3,3'-Dichlorobenzidine, Benzo(a)anthracene, Chrysene, bis(2-ethylhexyl)phthalate, Di-n-octylphthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene

## 9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all low level VOA, SVOA, Pesticide and Aroclor compounds were properly identified.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following low level volatile samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified "J".

E0047RE, E0048, E0048RE, E0049, E0052, E0052RE, E0053, E0055, E0058, E0064, E0072  
Toluene

E0051

Toluene, m,p-Xylene

Reviewed by: Steffanie Tobin/Techlaw-ESAT

Date: June 20, 2008

Case Number: 37407  
 Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0047  
 Laboratory: KAP Technologies, Inc.

E0061

Methylcyclohexane, Toluene, 1,1,2-Trichloroethane, o-Xylene, m,p-Xylene

E0062

Trichlorofluoromethane, 2-Butanone, Methylcyclohexane, Toluene, Ethylbenzene, o-Xylene, m,p-Xylene, Isopropylbenzene, 1,4-Dichlorobenzene

E0065

1,2-Dichloropropane, Toluene

E0073

Trichloroethene, Toluene, trans-1,3-Dichloropropene, 1,1,2,2-Tetrachloroethane

VBLKAB

Bromomethane, Acetone, Methylene chloride

VBLKAD

Bromomethane, Acetone, Methylene chloride, 1,3-Dichlorobenzene, 1,2,4-Trichlorobenzene, 1,2,3,-Trichlorobenzene

VBLKAH

Bromomethane, Methylene chloride, Toluene

VHBLK01

Acetone

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified "J".

E0047

Phenanthrene, Bis(2-ethylhexyl)phthalate, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene

E0049

Naphthalene, Dibenzofuran, Fluorene, Carbazole, Dibenzo(a,h)anthracene

E0050

Phenanthrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene

E0052

Phenanthrene, Fluoranthene, Pyrene, Benzo(g,h,i)perylene



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E0053, E0056

Phenanthrene, Fluoranthene, Pyrene, Bis(2-ethylhexyl)phthalate,  
Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

E0055

Naphthalene, Phenanthrene, Fluoranthene, Pyrene, Bis(2-ethylhexyl)phthalate,  
Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

E0057

1,1'-Biphenyl, Phenanthrene, Butylbenzylphthalate, Indeno(1,2,3-cd)pyrene,  
Dibenzo(a,h)anthracene

E0057MS

1,1'-Biphenyl, Phenanthrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene,  
Benzo(g,h,i)perylene

E0057MSD

1,1'-Biphenyl, Phenanthrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene

E0060

Phenanthrene, Fluoranthene, Pyrene, Bis(2-ethylhexyl)phthalate,  
Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene

E0064

Fluoranthene, Pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

E0065

Phenanthrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

E0067

Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

E0072

N-Nitroso-di-n-propylamine, Phenanthrene, Fluoranthene, Pyrene, Chrysene,  
Bis(2-ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene,  
Benzo(a)pyrene

SBLK69

Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene,  
Benzo(a)pyrene

SBLK72

Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0047  
Laboratory: KAP Technologies, Inc.

The following pesticide samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified "J".

E0055, E0057, E0067  
4,4'-DDT

E0072  
4,4'-DDE, 4,4'-DDD, 4,4'-DDT

PLCS60  
gamma-BHC (Lindane), Heptachlor epoxide, Dieldrin, 4,4'-DDE, Endrin,  
Endosulfan sulfate, gamma-Chlordane

PLCS64  
gamma-BHC (Lindane), Heptachlor epoxide, Dieldrin, 4,4'-DDE, Endosulfan sulfate

The relative percent difference between analyte results for the following pesticide samples is greater than 25%. The analyte concentrations are greater than 25% of the CRQL. Detected compounds are qualified "J".

E0055, E0067  
4,4'-DDT

E0057  
delta-BHC, 4,4'-DDT

The following aroclor samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified "J".

E0047, E0049  
Aroclor-1260

E0060  
Aroclor-1248

ALCS59  
Aroclor-1016, Aroclor-1260

The relative percent difference between analyte results for the following aroclor samples is greater than 25%. The analyte concentrations are greater than 25% of the CRQL. Detected compounds are qualified "J".

E0047  
Aroclor-1260



Case Number: 37407  
 Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0047  
 Laboratory: KAP Technologies, Inc.

E0055  
 Aroclor-1016

E0057  
 Aroclor-1016, Aroclor-1248

E0060  
 Aroclor-1248

## 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baselines for the pesticide and aroclor analyses were acceptable.

## 12. ADDITIONAL INFORMATION

The following semivolatile samples had a semivolatile target analyte reported as a LCSV Tentatively Identified Compound (TIC). Detected compounds in the affected semivolatile samples should be qualified "J" and non-detected compounds should be qualified "UJ".

Benzo(b)fluoranthene (Benz[e]acephenanthrylene)	Cas No 205-99-2	E0050
Benzo(a)pyrene	Cas No. 50-32-8	E0053
Benzo(k)fluoranthene	Cas No. 207-08-9	E0049, E0067

The CADRE and EDD spreadsheets did not include the following pesticide samples. The laboratory Form Is for these samples are included with the hard copy data package.

E0057MSD, PLCS60, PLCS64

The CADRE and EDD spreadsheets did not include the following aroclor samples. The laboratory Form Is for these samples are included with the hard copy data package.

ALCS59, ALCS63

The SV Form Vs (SV Organic Instrument Performance Check - DFTPP) submitted with this SDG did not identify the values obtained for the ion abundances for m/e 441. The m/e 441 were re-calculated using m/e 198 as base peak by the reviewer. The results are summarized in the following table. All ion abundances were within the acceptance criteria.

STD ID	Instrument ID	Date/time analyzed	Reported m/e (%)	Corrected m/e (%)
DFTPP08	F-5973	05/13/08 14:33	67.08	9.31
DFTPP10	F-5973	05/14/08 00:21	83.72	11.41
DFTPP12	F-5973	05/14/08 08:47	73.69	11.38

Reviewed by: Steffanie Tobin/Techlaw-ESAT  
 Date: June 20, 2008

Case Number: 37407

SDG Number: E0047

Site Name: Lake Calumet Smelting &amp; Refining (IL)

Laboratory: KAP Technologies, Inc.

STD ID	Instrument ID	Date/time analyzed	Reported m/e (%)	Corrected m/e (%)
DFTPP50	G-5973	05/13/08 10:43	79.96	11.92
DFTPP51	G-5973	05/13/08 15:26	74.39	10.23
DFTPP53	G-5973	05/13/08 23:10	74.84	11.78



CADRE Data Qualifier Sheet

Qualifiers

Data Qualifier Definitions

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present.)

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Number of Soil Samples : 20

Number of Water Samples : 0

Number of Sediment Samples : 0

Date :

Sample Number :	E0047		E0047RE		E0048		E0048RE		E0049	
Sampling Location :	X101		X101		X102		X102		X103	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/21/2008				4/21/2008				4/21/2008	
Time Sampled :										
%Moisture :	28		28		4		4		14	
pH :	5.1		5.1		4.9		4.9		5.3	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	6.6	UJ	7.2	U	4.7	U	6.9	U	6.5	U
Chloromethane	6.6	UJ	7.2	U	4.7	U	6.9	U	6.5	U
Vinyl chloride	6.6	UJ	7.2	U	4.7	U	6.9	U	6.5	U
Bromomethane	6.6	UJ	7.2	UJ	4.7	UJ	6.9	UJ	6.5	UJ
Chloroethane	6.6	UJ	7.2	U	4.7	U	6.9	U	6.5	U
Trichlorofluoromethane	6.6	UJ	7.2	UJ	4.7	U	6.9	U	6.5	U
1,1-Dichloroethene	6.6	UJ	7.2	U	4.7	U	6.9	U	6.5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	6.6	UJ	7.2	UJ	4.7	U	6.9	U	6.5	U
Acetone	13	UJ	14	U	9.3	U	14	U	13	U
Carbon disulfide	6.6	UJ	7.2	U	4.7	U	6.9	U	6.5	U
Methyl acetate	6.6	UJ	7.2	UJ	4.7	U	6.9	U	6.5	U
Methylene chloride	6.6	UJ	7.2	UJ	4.7	U	12	U	6.5	U
trans-1,2-Dichloroethene	6.6	UJ	7.2	U	4.7	U	6.9	U	6.5	U
Methyl tert-butyl ether	6.6	UJ	7.2	UJ	4.7	U	6.9	U	6.5	U
1,1-Dichloroethane	6.6	UJ	7.2	U	4.7	U	6.9	U	6.5	U
cis-1,2-Dichloroethene	6.6	UJ	7.2	U	4.7	U	6.9	U	6.5	U
2-Butanone	13	UJ	14	U	9.3	U	14	U	13	U
Bromochloromethane	6.6	UJ	7.2	U	4.7	U	6.9	U	6.5	U
Chloroform	13	U	7.2	U	4.7	U	6.9	U	6.5	U
1,1,1-Trichloroethane	6.6	UJ	7.2	UJ	4.7	U	6.9	UJ	6.5	U
Cyclohexane	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
Carbon tetrachloride	6.6	UJ	7.2	UJ	4.7	U	6.9	UJ	6.5	U
Benzene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
1,2-Dichloroethane	6.6	UJ	7.2	UJ	4.7	U	6.9	U	6.5	U
1,4-Dioxane	130	UJ	140	R	93	U	140	R	130	U
Trichloroethene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
Methylcyclohexane	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
1,2-Dichloropropane	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
Bromodichloromethane	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
cis-1,3-Dichloropropene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
4-Methyl-2-pentanone	13	UJ	14	U	9.3	U	14	UJ	13	U
Toluene	6.7	J	3.1	J	3.5	J	6.8	J	3.7	J
trans-1,3-Dichloropropene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0047	E0047RE		E0048		E0048RE		E0049		
Sampling Location :	X101	X101		X102		X102		X103		
Matrix :	Soil	Soil		Soil		Soil		Soil		
Units :	ug/Kg	ug/Kg		ug/Kg		ug/Kg		ug/Kg		
Date Sampled :	4/21/2008			4/21/2008				4/21/2008		
Time Sampled :										
%Moisture :	28	28		4		4		14		
pH :	5.1	5.1		4.9		4.9		5.3		
Dilution Factor :	1.0	1.0		1.0		1.0		1.0		
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
Tetrachloroethene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
2-Hexanone	13	UJ	14	U	9.3	U	14	UJ	13	U
Dibromochloromethane	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
1,2-Dibromoethane	6.6	UJ	7.2	UJ	4.7	U	6.9	UJ	6.5	U
Chlorobenzene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
Ethylbenzene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
o-Xylene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
m,p-Xylene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
Styrene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
Bromoform	6.6	UJ	7.2	U	4.7	UJ	6.9	UJ	6.5	U
Isopropylbenzene	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
1,1,2,2-Tetrachloroethane	6.6	UJ	7.2	U	4.7	U	6.9	UJ	6.5	U
1,3-Dichlorobenzene	6.6	UJ	7.2	U	4.7	UJ	6.9	UJ	6.5	U
1,4-Dichlorobenzene	6.6	UJ	7.2	U	4.7	UJ	6.9	UJ	6.5	U
1,2-Dichlorobenzene	6.6	UJ	7.2	U	4.7	UJ	6.9	UJ	6.5	U
1,2-Dibromo-3-chloropropane	6.6	UJ	7.2	U	4.7	UJ	6.9	UJ	6.5	U
1,2,4-Trichlorobenzene	6.6	UJ	7.2	U	4.7	UJ	6.9	UJ	6.5	U
1,2,3-Trichlorobenzene	6.6	UJ	7.2	U	4.7	UJ	6.9	UJ	6.5	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0050		E0051		E0052		E0052RE		E0053	
Sampling Location :	X104		X105		X106		X106		X107	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/21/2008		4/21/2008		4/21/2008				4/21/2008	
Time Sampled :										
%Moisture :	16		32		23		23		20	
pH :	5.8		5.6		5.3		5.3		5.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Chloromethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Vinyl chloride	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Bromomethane	9.3	UJ	7.2	UJ	6.5	UJ	6.6	UJ	5.5	UJ
Chloroethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Trichlorofluoromethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
1,1-Dichloroethene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Acetone	19	U	14	U	13	U	13	U	11	U
Carbon disulfide	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Methyl acetate	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Methylene chloride	9.3	U	7.2	U	6.5	U	6.7	U	5.5	U
trans-1,2-Dichloroethene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Methyl tert-butyl ether	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
1,1-Dichloroethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
cis-1,2-Dichloroethene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
2-Butanone	19	U	14	U	13	U	13	U	11	U
Bromochloromethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Chloroform	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
1,1,1-Trichloroethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Cyclohexane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Carbon tetrachloride	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Benzene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
1,2-Dichloroethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
1,4-Dioxane	190	U	140	U	130	U	130	R	110	U
Trichloroethene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Methylcyclohexane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
1,2-Dichloropropane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Bromodichloromethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
cis-1,3-Dichloropropene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
4-Methyl-2-pentanone	19	U	14	U	13	U	13	U	11	U
Toluene	9.3	U	4.4	J	4.0	J	5.9	J	2.1	J
trans-1,3-Dichloropropene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

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KAP

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Sample Number :	E0050		E0051		E0052		E0052RE		E0053	
Sampling Location :	X104		X105		X106		X106		X107	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/21/2008		4/21/2008		4/21/2008				4/21/2008	
Time Sampled :										
%Moisture :	16		32		23		23		20	
pH :	5.8		5.6		5.3		5.3		5.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Tetrachloroethene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
2-Hexanone	19	U	14	U	13	U	13	U	11	U
Dibromochloromethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
1,2-Dibromoethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Chlorobenzene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Ethylbenzene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
o-Xylene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
m,p-Xylene	9.3	U	3.7	J	6.5	U	6.6	U	5.5	U
Styrene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
Bromoform	9.3	U	7.2	U	6.5	UJ	6.6	UJ	5.5	U
Isopropylbenzene	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
1,1,2,2-Tetrachloroethane	9.3	U	7.2	U	6.5	U	6.6	U	5.5	U
1,3-Dichlorobenzene	9.3	U	7.2	U	6.5	UJ	6.6	UJ	5.5	U
1,4-Dichlorobenzene	9.3	U	7.2	U	6.5	UJ	6.6	UJ	5.5	U
1,2-Dichlorobenzene	9.3	U	7.2	U	6.5	UJ	6.6	UJ	5.5	U
1,2-Dibromo-3-chloropropane	9.3	U	7.2	U	6.5	UJ	6.6	UJ	5.5	U
1,2,4-Trichlorobenzene	9.3	U	7.2	U	6.5	UJ	6.6	UJ	5.5	U
1,2,3-Trichlorobenzene	9.3	U	7.2	U	6.5	UJ	6.6	UJ	5.5	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

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KAP

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Sample Number :	E0054		E0055		E0056		E0057		E0057MS	
Sampling Location :	X108		X109		X110		X111		X111	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/22/2008		4/22/2008		4/22/2008		4/22/2008			
Time Sampled :										
%Moisture :	26		11		31		14		14	
pH :	5.7		5.6		5.3		4.9		5	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Chloromethane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Vinyl chloride	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Bromomethane	6.6	UJ	6.0	UJ	7.1	UJ	4.8	UJ	6.1	UJ
Chloroethane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Trichlorofluoromethane	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
1,1-Dichloroethene	6.6	U	6.0	U	7.1	U	4.8	U	43	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
Acetone	13	U	12	U	14	U	9.5	U	12	U
Carbon disulfide	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Methyl acetate	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
Methylene chloride	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
trans-1,2-Dichloroethene	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Methyl tert-butyl ether	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
1,1-Dichloroethane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
cis-1,2-Dichloroethene	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
2-Butanone	13	U	12	U	14	U	9.5	U	12	U
Bromochloromethane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Chloroform	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
1,1,1-Trichloroethane	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
Cyclohexane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Carbon tetrachloride	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
Benzene	6.6	U	6.0	U	7.1	U	4.8	U	88	J
1,2-Dichloroethane	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
1,4-Dioxane	130	R	120	R	140	R	95	U	120	R
Trichloroethene	6.6	U	6.0	U	7.1	U	4.8	U	67	
Methylcyclohexane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
1,2-Dichloropropane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Bromodichloromethane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
cis-1,3-Dichloropropene	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
4-Methyl-2-pentanone	13	U	12	U	14	U	9.5	U	12	U
Toluene	6.6	U	2.3	J	7.1	U	4.8	U	80	
trans-1,3-Dichloropropene	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0054	E0055		E0056		E0057		E0057MS		
Sampling Location :	X108	X109		X110		X111		X111		
Matrix :	Soil	Soil		Soil		Soil		Soil		
Units :	ug/Kg	ug/Kg		ug/Kg		ug/Kg		ug/Kg		
Date Sampled :	4/22/2008	4/22/2008		4/22/2008		4/22/2008				
Time Sampled :										
%Moisture :	26	11		31		14		14		
pH :	5.7	5.6		5.3		4.9		5		
Dilution Factor :	1.0	1.0		1.0		1.0		1.0		
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
Tetrachloroethene	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
2-Hexanone	13	U	12	U	14	U	9.5	U	12	U
Dibromochloromethane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
1,2-Dibromoethane	6.6	UJ	6.0	U	7.1	U	4.8	U	6.1	U
Chlorobenzene	6.6	U	6.0	U	7.1	U	4.8	U	69	
Ethylbenzene	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
o-Xylene	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
m,p-Xylene	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Styrene	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
Bromoform	6.6	U	6.0	U	7.1	U	4.8	UJ	6.1	UJ
Isopropylbenzene	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
1,1,2,2-Tetrachloroethane	6.6	U	6.0	U	7.1	U	4.8	U	6.1	U
1,3-Dichlorobenzene	6.6	U	6.0	U	7.1	U	4.8	UJ	6.1	UJ
1,4-Dichlorobenzene	6.6	U	6.0	U	7.1	U	4.8	UJ	6.1	UJ
1,2-Dichlorobenzene	6.6	U	6.0	U	7.1	U	4.8	UJ	6.1	UJ
1,2-Dibromo-3-chloropropane	6.6	U	6.0	U	7.1	U	4.8	UJ	6.1	UJ
1,2,4-Trichlorobenzene	6.6	U	6.0	U	7.1	U	4.8	UJ	6.1	UJ
1,2,3-Trichlorobenzene	6.6	U	6.0	U	7.1	U	4.8	UJ	6.1	UJ

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

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Sample Number :	E0057MSD		E0058		E0060		E0061		E0062	
Sampling Location :	X111		X112		X113		X114		X115	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :			4/22/2008		4/22/2008		4/22/2008		4/22/2008	
Time Sampled :										
%Moisture :	14		14		33		44		44	
pH :	5		5.1		5.9		5.6		5.7	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatle Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
Chloromethane	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
Vinyl chloride	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
Bromomethane	4.8	UJ	4.8	UJ	8.1	UJ	9.9	UJ	8.8	UJ
Chloroethane	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
Trichlorofluoromethane	4.8	U	4.8	U	8.1	UJ	9.9	U	3.6	J
1,1-Dichloroethene	33		4.8	U	8.1	U	9.9	U	8.8	U
1,1,2-Trichloro-1,2,2-trifluoroethane	4.8	U	4.8	U	8.1	UJ	9.9	U	8.8	U
Acetone	9.5	U	9.5	U	16	U	20	U	31	
Carbon disulfide	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
Methyl acetate	4.8	U	4.8	U	8.1	UJ	9.9	U	8.8	U
Methylene chloride	4.8	U	4.8	U	8.1	UJ	9.9	U	9.5	U
trans-1,2-Dichloroethene	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
Methyl tert-butyl ether	4.8	U	4.8	U	8.1	UJ	9.9	U	8.8	U
1,1-Dichloroethane	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
cis-1,2-Dichloroethene	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
2-Butanone	9.5	U	9.5	U	16	U	20	U	11	J
Bromochloromethane	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
Chloroform	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
1,1,1-Trichloroethane	4.8	U	4.8	U	8.1	UJ	9.9	U	8.8	U
Cyclohexane	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
Carbon tetrachloride	4.8	U	4.8	U	8.1	UJ	9.9	U	8.8	U
Benzene	68	J	4.8	U	8.1	U	9.9	U	8.8	U
1,2-Dichloroethane	4.8	U	4.8	U	8.1	UJ	9.9	U	8.8	U
1,4-Dioxane	95	R	95	U	160	U	200	U	160	R
Trichloroethene	51	J	4.8	U	8.1	U	9.9	U	8.8	U
Methylcyclohexane	4.8	U	4.8	U	8.1	U	4.4	J	3.1	J
1,2-Dichloropropane	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
Bromodichloromethane	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
cis-1,3-Dichloropropene	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
4-Methyl-2-pentanone	9.5	U	9.5	U	16	U	20	U	18	U
Toluene	62	J	2.4	J	8.1	U	4.4	J	7.9	J
trans-1,3-Dichloropropene	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

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KAP

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Date :

Sample Number :	E0057MSD		E0058		E0060		E0061		E0062	
Sampling Location :	X111		X112		X113		X114		X115	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :			4/22/2008		4/22/2008		4/22/2008		4/22/2008	
Time Sampled :										
%Moisture :	14		14		33		44		44	
pH :	5		5.1		5.9		5.6		5.7	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	4.8	U	4.8	U	8.1	U	4.7	J	8.8	U
Tetrachloroethene	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
2-Hexanone	9.5	U	9.5	U	16	U	20	U	18	U
Dibromochloromethane	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
1,2-Dibromoethane	4.8	U	4.8	U	8.1	UJ	9.9	U	8.8	U
Chlorobenzene	53		4.8	U	8.1	U	9.9	U	8.8	U
Ethylbenzene	4.8	U	4.8	U	8.1	U	9.9	U	3.0	J
o-Xylene	4.8	U	4.8	U	8.1	U	6.0	J	3.5	J
m,p-Xylene	4.8	U	4.8	U	8.1	U	4.7	J	3.8	J
Styrene	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
Bromoform	4.8	UJ	4.8	U	8.1	U	9.9	U	8.8	U
Isopropylbenzene	4.8	U	4.8	U	8.1	U	9.9	U	3.7	J
1,1,2,2-Tetrachloroethane	4.8	U	4.8	U	8.1	U	9.9	U	8.8	U
1,3-Dichlorobenzene	4.8	UJ	4.8	U	8.1	U	9.9	U	8.8	U
1,4-Dichlorobenzene	4.8	UJ	4.8	U	8.1	U	9.9	U	4.8	J
1,2-Dichlorobenzene	4.8	UJ	4.8	U	8.1	U	9.9	U	8.8	U
1,2-Dibromo-3-chloropropane	4.8	UJ	4.8	U	8.1	U	9.9	U	8.8	U
1,2,4-Trichlorobenzene	4.8	UJ	4.8	U	8.1	U	9.9	U	8.8	U
1,2,3-Trichlorobenzene	4.8	UJ	4.8	U	8.1	U	9.9	U	8.8	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0064	E0065	E0067	E0072	E0072RE					
Sampling Location :	X201	X116	X117	X118	X118					
Matrix :	Soil	Soil	Soil	Soil	Soil					
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Date Sampled :	4/22/2008	4/22/2008	4/22/2008	4/23/2008						
Time Sampled :										
%Moisture :	13	13	63	18	18					
pH :	5.3	6.1	5.3	6.3	6.3					
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Chloromethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Vinyl chloride	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Bromomethane	5.1	UJ	3.7	UJ	15	UJ	6.4	UJ	6.2	UJ
Chloroethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Trichlorofluoromethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
1,1-Dichloroethene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Acetone	10	U	7.5	U	30	U	13	U	12	U
Carbon disulfide	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Methyl acetate	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Methylene chloride	5.1	U	3.7	U	15	U	6.4	U	6.2	U
trans-1,2-Dichloroethene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Methyl tert-butyl ether	5.1	U	3.7	U	15	U	6.4	U	6.2	U
1,1-Dichloroethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
cis-1,2-Dichloroethene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
2-Butanone	10	U	7.5	U	30	U	13	U	12	U
Bromochloromethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Chloroform	5.1	U	3.7	U	15	U	6.4	U	6.2	U
1,1,1-Trichloroethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Cyclohexane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Carbon tetrachloride	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Benzene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
1,2-Dichloroethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
1,4-Dioxane	100	R	75	R	300	U	130	U	120	U
Trichloroethene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Methylcyclohexane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
1,2-Dichloropropane	5.1	U	1.3	J	15	U	6.4	U	6.2	U
Bromodichloromethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
cis-1,3-Dichloropropene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
4-Methyl-2-pentanone	10	U	7.5	U	30	U	13	U	12	U
Toluene	3.2	J	2.8	J	15	U	3.8	J	6.2	U
trans-1,3-Dichloropropene	5.1	U	3.7	U	15	U	6.4	U	6.2	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0064	E0065		E0067		E0072		E0072RE		
Sampling Location :	X201	X116		X117		X118		X118		
Matrix :	Soil	Soil		Soil		Soil		Soil		
Units :	ug/Kg	ug/Kg		ug/Kg		ug/Kg		ug/Kg		
Date Sampled :	4/22/2008	4/22/2008		4/22/2008		4/23/2008				
Time Sampled :										
%Moisture :	13	13		63		18		18		
pH :	5.3	6.1		5.3		6.3		6.3		
Dilution Factor :	1.0	1.0		1.0		1.0		1.0		
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Tetrachloroethene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
2-Hexanone	10	U	7.5	U	30	U	13	U	12	U
Dibromochloromethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
1,2-Dibromoethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Chlorobenzene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Ethylbenzene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
o-Xylene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
m,p-Xylene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Styrene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
Bromoform	5.1	U	3.7	U	15	U	6.4	UJ	6.2	UJ
Isopropylbenzene	5.1	U	3.7	U	15	U	6.4	U	6.2	U
1,1,2,2-Tetrachloroethane	5.1	U	3.7	U	15	U	6.4	U	6.2	U
1,3-Dichlorobenzene	5.1	U	3.7	U	15	U	6.4	UJ	6.2	UJ
1,4-Dichlorobenzene	5.1	U	3.7	U	15	U	6.4	UJ	6.2	UJ
1,2-Dichlorobenzene	5.1	U	3.7	U	15	U	6.4	UJ	6.2	UJ
1,2-Dibromo-3-chloropropane	5.1	U	3.7	U	15	U	6.4	UJ	6.2	UJ
1,2,4-Trichlorobenzene	5.1	U	3.7	U	15	U	6.4	UJ	6.2	UJ
1,2,3-Trichlorobenzene	5.1	U	3.7	U	15	U	6.4	UJ	6.2	UJ

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0073		VBLKAB		VBLKAD		VBLKAF		VBLKAH	
Sampling Location :	X119									
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008									
Time Sampled :										
%Moisture :	22		0		0		0		0	
pH :	5.9									
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Chloromethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Vinyl chloride	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromomethane	5.5	UJ	2.6	J	2.3	J	5.0	UJ	2.0	J
Chloroethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Trichlorofluoromethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1-Dichloroethene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone	11	U	5.0	J	2.2	J	10	U	10	U
Carbon disulfide	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Methyl acetate	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Methylene chloride	5.5	U	3.4	J	3.2	J	5.0	U	2.1	J
trans-1,2-Dichloroethene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Methyl tert-butyl ether	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1-Dichloroethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
cis-1,2-Dichloroethene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Butanone	11	U	10	U	10	U	10	U	10	U
Bromochloromethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Chloroform	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,1-Trichloroethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Cyclohexane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Carbon tetrachloride	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Benzene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dichloroethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,4-Dioxane	110	U	100	U	100	R	100	U	100	U
Trichloroethene	2.7	J	5.0	U	5.0	U	5.0	U	5.0	U
Methylcyclohexane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dichloropropane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromodichloromethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
cis-1,3-Dichloropropene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methyl-2-pentanone	11	U	10	U	10	U	10	U	10	U
Toluene	2.0	J	5.0	U	5.0	U	5.0	U	4.4	J
trans-1,3-Dichloropropene	2.2	J	5.0	U	5.0	U	5.0	U	5.0	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0073		VBKAB		VBKAD		VBKAF		VBKAH	
Sampling Location :	X119									
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008									
Time Sampled :										
%Moisture :	22		0		0		0		0	
pH :	5.9									
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Tetrachloroethene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Hexanone	11	U	10	U	10	U	10	U	10	U
Dibromochloromethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dibromoethane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Chlorobenzene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Ethylbenzene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
o-Xylene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
m,p-Xylene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Styrene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromoform	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
Isopropylbenzene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,2,2-Tetrachloroethane	2.7	U	5.0	U	5.0	U	5.0	U	5.0	U
1,3-Dichlorobenzene	5.5	U	5.0	U	1.8	J	5.0	U	5.0	U
1,4-Dichlorobenzene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dichlorobenzene	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dibromo-3-chloropropane	5.5	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2,4-Trichlorobenzene	5.5	U	5.0	U	1.8	J	5.0	U	5.0	U
1,2,3-Trichlorobenzene	5.5	U	5.0	U	2.0	J	5.0	U	5.0	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	VHBLK01									
Sampling Location :										
Matrix :	Soil									
Units :	ug/Kg									
Date Sampled :										
Time Sampled :										
%Moisture :	0									
pH :										
Dilution Factor :	1.0									
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0	U								
Chloromethane	5.0	U								
Vinyl chloride	5.0	U								
Bromomethane	5.0	UJ								
Chloroethane	5.0	U								
Trichlorofluoromethane	5.0	U								
1,1-Dichloroethene	5.0	U								
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U								
Acetone	1.9	J								
Carbon disulfide	5.0	U								
Methyl acetate	5.0	U								
Methylene chloride	5.0	U								
trans-1,2-Dichloroethene	5.0	U								
Methyl tert-butyl ether	5.0	U								
1,1-Dichloroethane	5.0	U								
cis-1,2-Dichloroethene	5.0	U								
2-Butanone	10	U								
Bromochloromethane	5.0	U								
Chloroform	5.0	U								
1,1,1-Trichloroethane	5.0	U								
Cyclohexane	5.0	U								
Carbon tetrachloride	5.0	U								
Benzene	5.0	U								
1,2-Dichloroethane	5.0	U								
1,4-Dioxane	100	U								
Trichloroethene	5.0	U								
Methylcyclohexane	5.0	U								
1,2-Dichloropropane	5.0	U								
Bromodichloromethane	5.0	U								
cis-1,3-Dichloropropene	5.0	U								
4-Methyl-2-pentanone	10	U								
Toluene	5.0	U								
trans-1,3-Dichloropropene	5.0	U								



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	VHBLK01									
Sampling Location :										
Matrix :	Soil									
Units :	ug/Kg									
Date Sampled :										
Time Sampled :										
%Moisture :	0									
pH :										
Dilution Factor :	1.0									
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0	U								
Tetrachloroethene	5.0	U								
2-Hexanone	10	U								
Dibromochloromethane	5.0	U								
1,2-Dibromoethane	5.0	U								
Chlorobenzene	5.0	U								
Ethylbenzene	5.0	U								
o-Xylene	5.0	U								
m,p-Xylene	5.0	U								
Styrene	5.0	U								
Bromoform	5.0	U								
Isopropylbenzene	5.0	U								
1,1,2,2-Tetrachloroethane	5.0	U								
1,3-Dichlorobenzene	5.0	U								
1,4-Dichlorobenzene	5.0	U								
1,2-Dichlorobenzene	5.0	U								
1,2-Dibromo-3-chloropropane	5.0	U								
1,2,4-Trichlorobenzene	5.0	U								
1,2,3-Trichlorobenzene	5.0	U								

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Number of Soil Samples : 20

Number of Water Samples : 0

Number of Sediment Samples : 0

Sample Number :	E0047		E0048		E0049		E0050		E0051	
Sampling Location :	X101		X102		X103		X104		X105	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/21/2008		4/21/2008		4/21/2008		4/21/2008		4/21/2008	
Time Sampled :										
%Moisture :	28		4		14		16		32	
pH :	5.1		4.9		5.3		5.8		5.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	240	U	180	U	200	U	200	U	250	U
Phenol	240	U	180	U	200	U	200	U	250	U
Bis(2-chloroethyl)ether	240	U	180	U	200	U	200	U	250	U
2-Chlorophenol	240	U	180	U	200	U	200	U	250	U
2-Methylphenol	240	U	180	U	200	U	200	U	250	U
2,2'-Oxybis(1-chloropropane)	240	U	180	U	200	U	200	U	250	U
Acetophenone	240	U	180	U	200	U	200	U	250	U
4-Methylphenol	240	U	180	U	200	U	200	U	250	U
N-Nitroso-di-n-propylamine	240	U	180	U	200	U	200	U	250	U
Hexachloroethane	240	U	180	U	200	U	200	U	250	U
Nitrobenzene	240	U	180	U	200	U	200	U	250	U
Isophorone	240	U	180	U	200	U	200	U	250	U
2-Nitrophenol	240	U	180	U	200	U	200	U	250	U
2,4-Dimethylphenol	240	U	180	U	200	U	200	U	250	U
Bis(2-chloroethoxy)methane	240	U	180	U	200	U	200	U	250	U
2,4-Dichlorophenol	240	U	180	U	200	U	200	U	250	U
Naphthalene	240	U	180	U	160	U	200	U	250	U
4-Chloroaniline	240	U	180	U	200	U	200	U	250	U
Hexachlorobutadiene	240	U	180	U	200	U	200	U	250	U
Caprolactam	240	U	180	U	200	U	200	U	250	U
4-Chloro-3-methylphenol	240	U	180	U	200	U	200	U	250	U
2-Methylnaphthalene	240	U	180	U	200	U	200	U	250	U
Hexachlorocyclopentadiene	240	U	180	U	200	U	200	U	250	U
2,4,6-Trichlorophenol	240	U	180	U	200	U	200	U	250	U
2,4,5-Trichlorophenol	240	U	180	U	200	U	200	U	250	U
1,1'-Biphenyl	240	U	180	U	200	U	200	U	250	U
2-Chloronaphthalene	240	U	180	U	200	U	200	U	250	U
2-Nitroaniline	460	U	340	U	380	U	390	U	480	U
Dimethylphthalate	240	U	180	U	200	U	200	U	250	U
2,6-Dinitrotoluene	240	U	180	U	200	U	200	U	250	U
Acenaphthylene	240	U	180	U	200	U	200	U	250	U
3-Nitroaniline	460	U	340	U	380	U	390	U	480	U
Acenaphthene	240	U	180	U	200	U	200	U	250	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0047	E0048	E0049	E0050	E0051					
Sampling Location :	X101	X102	X103	X104	X105					
Matrix :	Soil	Soil	Soil	Soil	Soil					
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Date Sampled :	4/21/2008	4/21/2008	4/21/2008	4/21/2008	4/21/2008					
Time Sampled :										
%Moisture :	28	4	14	16	32					
pH :	5.1	4.9	5.3	5.8	5.6					
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	460	U	340	U	380	U	390	U	480	U
4-Nitrophenol	460	U	340	U	380	U	390	U	480	U
Dibenzofuran	240	U	180	U	100	J	200	U	250	U
2,4-Dinitrotoluene	240	U	180	U	200	U	200	U	250	U
Diethylphthalate	240	U	180	U	200	U	200	U	250	U
Fluorene	240	U	180	U	150	J	200	U	250	U
4-Chlorophenyl-phenylether	240	U	180	U	200	U	200	U	250	U
4-Nitroaniline	460	U	340	U	380	U	390	U	480	U
4,6-Dinitro-2-methylphenol	460	U	340	U	380	U	390	U	480	U
N-Nitrosodiphenylamine	240	U	180	U	200	U	200	U	250	U
1,2,4,5-Tetrachlorobenzene	240	U	180	U	200	U	200	U	250	U
4-Bromophenyl-phenylether	240	U	180	U	200	U	200	U	250	U
Hexachlorobenzene	240	U	180	U	200	U	200	U	250	U
Atrazine	240	U	180	U	200	U	200	U	250	U
Pentachlorophenol	460	R	340	U	380	U	390	R	480	U
Phenanthrene	25	J	180	U	1200		160	J	250	U
Anthracene	240	U	180	U	200		200	U	250	U
Carbazole	240	U	180	U	180	J	200	U	250	U
Di-n-butylphthalate	240	U	180	U	200	U	200	U	250	U
Fluoranthene	240	U	180	U	1200		230		250	U
Pyrene	240	U	180	U	890		200		250	U
Butylbenzylphthalate	240	U	180	U	200	U	200	U	250	U
3,3'-Dichlorobenzidine	240	U	180	U	200	U	200	U	250	U
Benzo(a)anthracene	240	U	180	U	460	U	200	U	250	U
Chrysene	240	U	180	U	520	U	200	U	250	U
Bis(2-ethylhexyl)phthalate	30	J	180	U	200	U	200	U	250	U
Di-n-octylphthalate	240	U	180	U	200	U	200	U	250	U
Benzo(b)fluoranthene	240	U	180	U	390	U	200	UJ	250	U
Benzo(k)fluoranthene	240	U	180	U	390	UJ	200	U	250	U
Benzo(a)pyrene	240	U	180	U	430	U	200	U	250	U
Indeno(1,2,3-cd)pyrene	17	J	180	U	240		110	J	250	U
Dibenzo(a,h)anthracene	17	J	180	U	120	J	55	J	250	U
Benzo(g,h,i)perylene	19	J	180	U	260		130	J	250	U
2,3,4,6-Tetrachlorophenol	240	U	180	U	200	U	200	U	250	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0052		E0053		E0054		E0055		E0056	
Sampling Location :	X106		X107		X108		X109		X110	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/21/2008		4/21/2008		4/22/2008		4/22/2008		4/22/2008	
Time Sampled :										
%Moisture :	23		20		26		11		31	
pH :	5.3		5.6		5.7		5.6		5.3	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	220	U	210	U	230	U	190	U	250	U
Phenol	220	U	210	U	230	U	190	U	250	U
Bis(2-chloroethyl)ether	220	U	210	U	230	U	190	U	250	U
2-Chlorophenol	220	U	210	U	230	U	190	U	250	U
2-Methylphenol	220	U	210	U	230	U	190	U	250	U
2,2'-Oxybis(1-chloropropane)	220	U	210	U	230	U	190	U	250	U
Acetophenone	220	U	210	U	230	U	190	U	250	U
4-Methylphenol	220	U	210	U	230	U	190	U	250	U
N-Nitroso-di-n-propylamine	220	U	210	U	230	U	190	U	250	U
Hexachloroethane	220	U	210	U	230	U	190	U	250	U
Nitrobenzene	220	U	210	U	230	U	190	U	250	U
Isophorone	220	U	210	U	230	U	190	U	250	U
2-Nitrophenol	220	U	210	U	230	U	190	U	250	U
2,4-Dimethylphenol	220	U	210	U	230	U	190	U	250	U
Bis(2-chloroethoxy)methane	220	U	210	U	230	U	190	U	250	U
2,4-Dichlorophenol	220	U	210	U	230	U	190	U	250	U
Naphthalene	220	U	210	U	230	U	76	J	250	U
4-Chloroaniline	220	U	210	U	230	U	190	U	250	U
Hexachlorobutadiene	220	U	210	U	230	U	190	U	250	U
Caprolactam	220	U	210	U	230	U	190	U	250	U
4-Chloro-3-methylphenol	220	U	210	U	230	U	190	U	250	U
2-Methylnaphthalene	220	U	210	U	230	U	190	U	250	U
Hexachlorocyclopentadiene	220	U	210	U	230	U	190	U	250	U
2,4,6-Trichlorophenol	220	U	210	U	230	U	190	U	250	U
2,4,5-Trichlorophenol	220	U	210	U	230	U	190	U	250	U
1,1'-Biphenyl	220	U	210	U	230	U	190	U	250	U
2-Chloronaphthalene	220	U	210	U	230	U	190	U	250	U
2-Nitroaniline	430	U	410	U	440	U	370	U	480	U
Dimethylphthalate	220	U	210	U	230	U	190	U	250	U
2,6-Dinitrotoluene	220	U	210	U	230	U	190	U	250	U
Acenaphthylene	220	U	210	U	230	U	190	U	250	U
3-Nitroaniline	430	U	410	U	440	U	370	U	480	U
Acenaphthene	220	U	210	U	230	U	190	U	250	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0052		E0053		E0054		E0055		E0056	
Sampling Location :	X106		X107		X108		X109		X110	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/21/2008		4/21/2008		4/22/2008		4/22/2008		4/22/2008	
Time Sampled :										
%Moisture :	23		20		26		11		31	
pH :	5.3		5.6		5.7		5.6		5.3	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	430	U	410	U	440	U	370	U	480	U
4-Nitrophenol	430	U	410	U	440	U	370	U	480	U
Dibenzofuran	220	U	210	U	230	U	190	U	250	U
2,4-Dinitrotoluene	220	U	210	U	230	U	190	U	250	U
Diethylphthalate	220	U	210	U	230	U	190	U	250	U
Fluorene	220	U	210	U	230	U	190	U	250	U
4-Chlorophenyl-phenylether	220	U	210	U	230	U	190	U	250	U
4-Nitroaniline	430	U	410	U	440	U	370	U	480	U
4,6-Dinitro-2-methylphenol	430	U	410	U	440	U	370	U	480	U
N-Nitrosodiphenylamine	220	U	210	U	230	U	190	U	250	U
1,2,4,5-Tetrachlorobenzene	220	U	210	U	230	U	190	U	250	U
4-Bromophenyl-phenylether	220	U	210	U	230	U	190	U	250	U
Hexachlorobenzene	220	U	210	U	230	U	190	U	250	U
Atrazine	220	U	210	U	230	U	190	U	250	U
Pentachlorophenol	430	U	410	R	440	U	370	U	480	U
Phenanthrene	32	J	27	J	230	U	120	J	150	J
Anthracene	220	U	210	U	230	U	190	U	250	U
Carbazole	220	U	210	U	230	U	190	U	250	U
Di-n-butylphthalate	220	U	210	U	230	U	190	U	250	U
Fluoranthene	37	J	33	J	230	U	180	J	210	J
Pyrene	32	J	34	J	230	U	160	J	220	J
Butylbenzylphthalate	220	U	210	U	230	U	330		250	U
3,3'-Dichlorobenzidine	220	U	210	U	230	U	190	U	250	U
Benzo(a)anthracene	220	U	210	U	230	U	190	U	250	U
Chrysene	220	U	210	U	230	U	190	U	250	U
Bis(2-ethylhexyl)phthalate	220	U	27	J	230	U	110	J	110	J
Di-n-octylphthalate	220	U	210	U	230	U	190	U	250	U
Benzo(b)fluoranthene	220	U	210	U	230	U	190	U	250	U
Benzo(k)fluoranthene	220	U	210	U	230	U	190	U	250	U
Benzo(a)pyrene	220	U	210	UJ	230	U	190	U	250	U
Indeno(1,2,3-cd)pyrene	220	U	28	J	230	U	89	J	110	J
Dibenzo(a,h)anthracene	220	U	210	U	230	U	190	U	250	U
Benzo(g,h,i)perylene	33	J	31	J	230	U	120	J	150	J
2,3,4,6-Tetrachlorophenol	220	U	210	U	230	U	190	U	250	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0057		E0057MS		E0057MSD		E0058		E0060	
Sampling Location :	X111		X111		X111		X112		X113	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/22/2008						4/22/2008		4/22/2008	
Time Sampled :										
%Moisture :	14		14		14		14		33	
pH :	4.9		4.9		4.9		5.1		5.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatle Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	620	J	440	J	420	J	200	U	250	U
Phenol	200	U	1400	J	1600	J	200	U	250	U
Bis(2-chloroethyl)ether	200	U	200	U	200	U	200	U	250	U
2-Chlorophenol	200	U	1200		1400		200	U	250	U
2-Methylphenol	200	U	200	U	200	U	200	U	250	U
2,2'-Oxybis(1-chloropropane)	200	U	200	U	200	U	200	U	250	U
Acetophenone	960		800		860		200	U	250	U
4-Methylphenol	200	U	200	U	200	U	200	U	250	U
N-Nitroso-di-n-propylamine	200	U	1300	J	1500	J	200	U	250	U
Hexachloroethane	200	U	200	U	200	U	200	U	250	U
Nitrobenzene	200	U	200	U	200	U	200	U	250	U
Isophorone	200	U	200	U	200	U	200	U	250	U
2-Nitrophenol	200	U	200	U	200	U	200	U	250	U
2,4-Dimethylphenol	200	U	200	U	200	U	200	U	250	U
Bis(2-chloroethoxy)methane	200	U	200	U	200	U	200	U	250	U
2,4-Dichlorophenol	200	U	200	U	200	U	200	U	250	U
Naphthalene	1300		980		1000		200	U	250	U
4-Chloroaniline	200	U	200	U	200	U	200	U	250	U
Hexachlorobutadiene	200	U	200	U	200	U	200	U	250	U
Caprolactam	200	U	200	U	200	U	200	U	250	U
4-Chloro-3-methylphenol	200	U	1600		1700		200	U	250	U
2-Methylnaphthalene	470		340		380		200	U	250	U
Hexachlorocyclopentadiene	200	U	200	U	200	U	200	U	250	U
2,4,6-Trichlorophenol	200	U	200	U	200	U	200	U	250	U
2,4,5-Trichlorophenol	200	U	200	U	200	U	200	U	250	U
1,1'-Biphenyl	140	J	89	J	100	J	200	U	250	U
2-Chloronaphthalene	200	U	200	U	200	U	200	U	250	U
2-Nitroaniline	380	U	380	U	380	U	380	U	490	U
Dimethylphthalate	200	U	200	U	200	U	200	U	250	U
2,6-Dinitrotoluene	200	U	200	U	200	U	200	U	250	U
Acenaphthylene	200	U	200	U	200	U	200	U	250	U
3-Nitroaniline	380	U	380	U	380	U	380	U	490	U
Acenaphthene	200	U	1200		1200		200	U	250	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0057		E0057MS		E0057MSD		E0058		E0060	
Sampling Location :	X111		X111		X111		X112		X113	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/22/2008						4/22/2008		4/22/2008	
Time Sampled :										
%Moisture :	14		14		14		14		33	
pH :	4.9		4.9		4.9		5.1		5.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatle Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	380	U	380	U	380	U	380	U	490	U
4-Nitrophenol	380	U	1600		1400		380	U	490	U
Dibenzofuran	200	U	200	U	200	U	200	U	250	U
2,4-Dinitrotoluene	200	U	1400		1300		200	U	250	U
Diethylphthalate	200	U	200	U	200	U	200	U	250	U
Fluorene	200	U	200	U	200	U	200	U	250	U
4-Chlorophenyl-phenylether	200	U	200	U	200	U	200	U	250	U
4-Nitroaniline	380	U	380	U	380	U	380	U	490	U
4,6-Dinitro-2-methylphenol	380	U	380	U	380	U	380	U	490	U
N-Nitrosodiphenylamine	200	U	200	U	200	U	200	U	250	U
1,2,4,5-Tetrachlorobenzene	200	U	200	U	200	U	200	U	250	U
4-Bromophenyl-phenylether	200	U	200	U	200	U	200	U	250	U
Hexachlorobenzene	200	U	200	U	200	U	200	U	250	U
Atrazine	200	U	200	U	200	U	200	U	250	U
Pentachlorophenol	380	U	1200		1200		380	U	490	U
Phenanthrene	180	J	180	J	190	J	200	U	57	J
Anthracene	200	U	200	U	200	U	200	U	250	U
Carbazole	200	U	200	U	200	U	200	U	250	U
Di-n-butylphthalate	1700		1500		1600		200	U	250	U
Fluoranthene	250		320		330		200	U	73	J
Pyrene	220	J	1200	J	1200	J	200	U	71	J
Butylbenzylphthalate	96	J	300	J	290	J	200	U	250	U
3,3'-Dichlorobenzidine	200	U	200	U	200	U	200	U	250	U
Benzo(a)anthracene	200	U	200	U	200	U	200	U	250	U
Chrysene	250	U	260	U	260	U	200	U	250	U
Bis(2-ethylhexyl)phthalate	260	J	270	J	290	J	200	U	56	J
Di-n-octylphthalate	200	U	200	U	200	U	200	U	250	U
Benzo(b)fluoranthene	230	U	200	U	250	U	200	U	250	U
Benzo(k)fluoranthene	200	U	200	U	200	U	200	U	250	U
Benzo(a)pyrene	210	U	200	U	210	U	200	U	250	U
Indeno(1,2,3-cd)pyrene	140	J	140	J	160	J	200	U	76	J
Dibenzo(a,h)anthracene	110	J	85	J	86	J	200	U	57	J
Benzo(g,h,i)perylene	210	J	190	J	210	J	200	U	85	J
2,3,4,6-Tetrachlorophenol	200	U	200	U	200	U	200	U	250	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0061		E0062		E0064		E0065		E0067	
Sampling Location :	X114		X115		X201		X116		X117	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/22/2008		4/22/2008		4/22/2008		4/22/2008		4/22/2008	
Time Sampled :										
%Moisture :	44		44		13		13		63	
pH :	5.6		5.7		5.3		6.1		5.3	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	300	U	300	U	190	U	190	U	460	U
Phenol	300	U	300	U	190	U	190	U	460	U
Bis(2-chloroethyl)ether	300	U	300	U	190	U	190	U	460	U
2-Chlorophenol	300	U	300	U	190	U	190	U	460	U
2-Methylphenol	300	U	300	U	190	U	190	U	460	U
2,2'-Oxybis(1-chloropropane)	300	U	300	U	190	U	190	U	460	U
Acetophenone	300	U	300	U	190	U	190	U	460	U
4-Methylphenol	300	U	300	U	190	U	190	U	460	U
N-Nitroso-di-n-propylamine	300	U	300	U	190	U	190	U	680	
Hexachloroethane	300	U	300	U	190	U	190	U	460	U
Nitrobenzene	300	U	300	U	190	U	190	U	460	U
Isophorone	300	U	300	U	190	U	190	U	460	U
2-Nitrophenol	300	U	300	U	190	U	190	U	460	U
2,4-Dimethylphenol	300	U	300	U	190	U	190	U	460	U
Bis(2-chloroethoxy)methane	300	U	300	U	190	U	190	U	460	U
2,4-Dichlorophenol	300	U	300	U	190	U	190	U	460	U
Naphthalene	300	U	300	U	190	U	190	U	460	U
4-Chloroaniline	300	U	300	U	190	U	190	U	460	U
Hexachlorobutadiene	300	U	300	U	190	U	190	U	460	U
Caprolactam	300	U	300	U	190	U	190	U	460	U
4-Chloro-3-methylphenol	300	U	300	U	190	U	190	U	460	U
2-Methylnaphthalene	300	U	300	U	190	U	190	U	460	U
Hexachlorocyclopentadiene	300	U	300	U	190	U	190	U	460	U
2,4,6-Trichlorophenol	300	U	300	U	190	U	190	U	460	U
2,4,5-Trichlorophenol	300	U	300	U	190	U	190	U	460	U
1,1'-Biphenyl	300	U	300	U	190	U	190	U	460	U
2-Chloronaphthalene	300	U	300	U	190	U	190	U	460	U
2-Nitroaniline	590	U	590	U	380	U	380	U	890	U
Dimethylphthalate	300	U	300	U	190	U	190	U	460	U
2,6-Dinitrotoluene	300	U	300	U	190	U	190	U	760	
Acenaphthylene	300	U	300	U	190	U	190	U	460	U
3-Nitroaniline	590	U	590	U	380	U	380	U	890	U
Acenaphthene	300	U	300	U	190	U	190	U	460	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0061		E0062		E0064		E0065		E0067	
Sampling Location :	X114		X115		X201		X116		X117	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/22/2008		4/22/2008		4/22/2008		4/22/2008		4/22/2008	
Time Sampled :										
%Moisture :	44		44		13		13		63	
pH :	5.6		5.7		5.3		6.1		5.3	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	590	U	590	U	380	U	380	U	890	U
4-Nitrophenol	590	U	590	U	380	U	380	U	890	U
Dibenzofuran	300	U	300	U	190	U	190	U	460	U
2,4-Dinitrotoluene	300	U	300	U	190	U	190	U	460	U
Diethylphthalate	300	U	300	U	190	U	190	U	460	U
Fluorene	300	U	300	U	190	U	190	U	460	U
4-Chlorophenyl-phenylether	300	U	300	U	190	U	190	U	460	U
4-Nitroaniline	590	U	590	U	380	U	380	U	890	U
4,6-Dinitro-2-methylphenol	590	U	590	U	380	U	380	U	890	U
N-Nitrosodiphenylamine	300	U	300	U	190	U	190	U	460	U
1,2,4,5-Tetrachlorobenzene	300	U	300	U	190	U	190	U	460	U
4-Bromophenyl-phenylether	300	U	300	U	190	U	190	U	460	U
Hexachlorobenzene	300	U	300	U	190	U	190	U	460	U
Atrazine	300	U	300	U	190	U	190	U	460	U
Pentachlorophenol	590	U	590	U	380	U	380	U	890	U
Phenanthrene	300	U	300	U	190	U	140	J	1200	
Anthracene	300	U	300	U	190	U	190	U	1100	
Carbazole	300	U	300	U	190	U	190	U	460	U
Di-n-butylphthalate	300	U	300	U	190	U	190	U	460	U
Fluoranthene	300	U	300	UJ	55	J	260		1500	
Pyrene	300	U	300	UJ	65	J	220		1200	
Butylbenzylphthalate	300	U	300	U	190	U	190	U	460	U
3,3'-Dichlorobenzidine	300	U	300	U	190	U	190	U	460	U
Benzo(a)anthracene	300	U	300	UJ	190	U	190	U	600	U
Chrysene	300	U	300	UJ	190	U	190	U	650	U
Bis(2-ethylhexyl)phthalate	300	U	300	U	190	U	190	U	460	U
Di-n-octylphthalate	300	U	300	U	190	U	190	U	460	U
Benzo(b)fluoranthene	300	U	300	U	190	U	190	U	540	U
Benzo(k)fluoranthene	300	U	300	U	190	U	190	U	460	UJ
Benzo(a)pyrene	300	U	300	U	190	U	190	U	550	U
Indeno(1,2,3-cd)pyrene	300	U	300	U	55	J	97	J	330	J
Dibenzo(a,h)anthracene	300	U	300	U	190	U	190	U	460	U
Benzo(g,h,i)perylene	300	U	300	U	64	J	120	J	350	J
2,3,4,6-Tetrachlorophenol	300	U	300	U	190	U	190	U	460	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0072	E0073	SBLK69	SBLK72						
Sampling Location :	X118	X119								
Matrix :	Soil	Soil	Soil	Soil						
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg						
Date Sampled :	4/23/2008	4/23/2008								
Time Sampled :										
%Moisture :	18	22	0	0						
pH :	6.3	5.9								
Dilution Factor :	1.0	1.0	1.0	1.0						
Semivolatle Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	210	U	220	U	170	U	170	U		
Phenol	210	U	220	U	170	U	170	U		
Bis(2-chloroethyl)ether	210	U	220	U	170	U	170	U		
2-Chlorophenol	210	U	220	U	170	U	170	U		
2-Methylphenol	210	U	220	U	170	U	170	U		
2,2'-Oxybis(1-chloropropane)	210	U	220	U	170	U	170	U		
Acetophenone	210	U	220	U	170	U	170	U		
4-Methylphenol	210	U	220	U	170	U	170	U		
N-Nitroso-di-n-propylamine	210	U	220	U	170	U	170	U		
Hexachloroethane	210	U	220	U	170	U	170	U		
Nitrobenzene	210	U	220	U	170	U	170	U		
Isophorone	210	U	220	U	170	U	170	U		
2-Nitrophenol	210	U	220	U	170	U	170	U		
2,4-Dimethylphenol	210	U	220	U	170	U	170	U		
Bis(2-chloromethoxy)methane	210	U	220	U	170	U	170	U		
2,4-Dichlorophenol	210	U	220	U	170	U	170	U		
Naphthalene	210	U	220	U	170	U	170	U		
4-Chloroaniline	210	U	220	U	170	U	170	U		
Hexachlorobutadiene	210	U	220	U	170	U	170	U		
Caprolactam	210	U	220	U	170	U	170	U		
4-Chloro-3-methylphenol	210	U	220	U	170	U	170	U		
2-Methylnaphthalene	210	U	220	U	170	U	170	U		
Hexachlorocyclopentadiene	210	U	220	U	170	U	170	U		
2,4,6-Trichlorophenol	210	U	220	U	170	U	170	U		
2,4,5-Trichlorophenol	210	U	220	U	170	U	170	U		
1,1'-Biphenyl	210	U	220	U	170	U	170	U		
2-Chloronaphthalene	210	U	220	U	170	U	170	U		
2-Nitroaniline	400	U	420	U	330	U	330	U		
Dimethylphthalate	210	U	220	U	170	U	170	U		
2,6-Dinitrotoluene	210	U	220	U	170	U	170	U		
Acenaphthylene	210	U	220	U	170	U	170	U		
3-Nitroaniline	400	U	420	U	330	U	330	U		
Acenaphthene	210	U	220	U	170	U	170	U		

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0072	E0073	SBLK69	SBLK72						
Sampling Location :	X118	X119								
Matrix :	Soil	Soil	Soil	Soil						
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg						
Date Sampled :	4/23/2008	4/23/2008								
Time Sampled :										
%Moisture :	18	22	0	0						
pH :	6.3	5.9								
Dilution Factor :	1.0	1.0	1.0	1.0						
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	400	U	420	U	330	U	330	U		
4-Nitrophenol	400	U	420	U	330	U	330	U		
Dibenzofuran	210	U	220	U	170	U	170	U		
2,4-Dinitrotoluene	210	U	220	U	170	U	170	U		
Diethylphthalate	210	U	220	U	170	U	170	U		
Fluorene	210	U	220	U	170	U	170	U		
4-Chlorophenyl-phenylether	210	U	220	U	170	U	170	U		
4-Nitroaniline	400	U	420	U	330	U	330	U		
4,6-Dinitro-2-methylphenol	400	U	420	U	330	U	330	U		
N-Nitrosodiphenylamine	70	J	220	U	170	U	170	U		
1,2,4,5-Tetrachlorobenzene	210	U	220	U	170	U	170	U		
4-Bromophenyl-phenylether	210	U	220	U	170	U	170	U		
Hexachlorobenzene	210	U	220	U	170	U	170	U		
Atrazine	210	U	220	U	170	U	170	U		
Pentachlorophenol	400	R	420	R	330	U	330	R		
Phenanthrene	90	J	220	U	170	U	170	U		
Anthracene	210	U	220	U	170	U	170	U		
Carbazole	210	U	220	U	170	U	170	U		
Di-n-butylphthalate	210	U	220	U	170	U	170	U		
Fluoranthene	160	J	220	U	170	U	170	U		
Pyrene	130	J	220	U	170	U	170	U		
Butylbenzylphthalate	210	U	220	U	170	U	170	U		
3,3'-Dichlorobenzidine	210	U	220	U	170	U	170	U		
Benzo(a)anthracene	280		220	U	32	J	170	U		
Chrysene	100	J	220	U	34	J	170	U		
Bis(2-ethylhexyl)phthalate	190	J	220	U	170	U	170	U		
Di-n-octylphthalate	210	U	220	U	170	U	170	U		
Benzo(b)fluoranthene	98	J	220	U	32	J	170	U		
Benzo(k)fluoranthene	73	J	220	U	34	J	170	U		
Benzo(a)pyrene	86	J	220	U	32	J	170	U		
Indeno(1,2,3-cd)pyrene	210	U	220	U	170	U	18	J		
Dibenzo(a,h)anthracene	210	U	220	U	170	U	170	U		
Benzo(g,h,i)perylene	210	U	220	U	170	U	17	J		
2,3,4,6-Tetrachlorophenol	210	U	220	U	170	U	170	U		

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Number of Soil Samples : 20

Number of Water Samples : 0

Number of Sediment Samples : 0

Date :

Sample Number :	E0047		E0048		E0049		E0050		E0050MSD	
Sampling Location :	X101		X102		X103		X104		X104	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/21/2008		4/21/2008		4/21/2008		4/21/2008			
Time Sampled :										
%Moisture :	28		4		14		16		16	
pH :	5.1		4.9		5.3		5.8		5.8	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	2.4	U	1.8	U	2.0	U	2.0	U	2.0	U
beta-BHC	2.4	U	1.8	U	2.0	U	2.0	U	2.0	U
delta-BHC	2.4	U	1.8	U	2.0	U	2.0	U	2.0	U
gamma-BHC (Lindane)	2.4	U	1.8	U	2.0	U	2.0	U	17	
Heptachlor	2.4	U	1.8	U	2.0	U	2.0	U	15	
Aldrin	2.4	U	1.8	U	2.0	U	2.0	U	15	
Heptachlor epoxide	2.4	U	1.8	U	2.0	U	2.0	U	2.0	U
Endosulfan I	2.4	U	1.8	U	2.0	U	2.0	U	2.0	U
Dieldrin	4.6	U	3.4	U	3.8	U	3.9	U	29	
4,4'-DDE	4.6	U	3.4	U	3.8	U	3.9	U	3.9	U
Endrin	4.6	U	3.4	U	3.8	U	3.9	U	34	
Endosulfan II	4.6	U	3.4	U	3.8	U	3.9	U	3.9	U
4,4'-DDD	4.6	U	3.4	U	3.8	U	3.9	U	3.9	U
Endosulfan sulfate	4.6	U	3.4	U	3.8	U	3.9	U	3.9	U
4,4'-DDT	4.6	U	3.4	U	3.8	U	3.9	U	27	
Methoxychlor	24	U	18	U	20	U	20	U	20	U
Endrin ketone	4.6	U	3.4	U	3.8	U	3.9	U	3.9	U
Endrin aldehyde	4.6	U	3.4	U	3.8	U	3.9	U	3.9	U
alpha-Chlordane	2.4	U	1.8	U	2.0	U	2.0	U	2.0	U
gamma-Chlordane	2.4	U	1.8	U	2.0	U	2.0	U	2.0	U
Toxaphene	240	U	180	U	200	U	200	U	200	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0051	E0052	E0053	E0054	E0055					
Sampling Location :	X105	X106	X107	X108	X109					
Matrix :	Soil	Soil	Soil	Soil	Soil					
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Date Sampled :	4/21/2008	4/21/2008	4/21/2008	4/22/2008	4/22/2008					
Time Sampled :										
%Moisture :	32	23	20	26	11					
pH :	5.6	5.3	5.6	5.7	5.6					
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	2.5	U	2.2	U	2.1	U	2.3	U	1.9	U
beta-BHC	2.5	U	2.2	U	2.1	U	2.3	U	1.9	U
delta-BHC	2.5	U	2.2	U	2.1	U	2.3	U	1.9	U
gamma-BHC (Lindane)	2.5	U	2.2	U	2.1	U	2.3	U	1.9	U
Heptachlor	2.5	U	2.2	U	2.1	U	2.3	U	1.9	U
Aldrin	2.5	U	2.2	U	2.1	U	2.3	U	1.9	U
Heptachlor epoxide	2.5	U	2.2	U	2.1	U	2.3	U	1.9	U
Endosulfan I	2.5	U	2.2	U	2.1	U	2.3	U	1.9	U
Dieldrin	4.9	U	4.3	U	4.1	U	4.5	U	3.7	U
4,4'-DDE	4.9	U	4.3	U	4.1	U	4.5	U	3.7	U
Endrin	4.9	U	4.3	U	4.1	U	4.5	U	3.7	U
Endosulfan II	4.9	U	4.3	U	4.1	U	4.5	U	3.7	U
4,4'-DDD	4.9	U	4.3	U	4.1	U	4.5	U	3.7	U
Endosulfan sulfate	4.9	U	4.3	U	4.1	U	4.5	U	3.7	U
4,4'-DDT	4.9	U	4.3	U	4.1	U	4.5	U	3.5	U
Methoxychlor	25	U	22	U	21	U	23	U	19	U
Endrin ketone	4.9	U	4.3	U	4.1	U	4.5	U	3.7	U
Endrin aldehyde	4.9	U	4.3	U	4.1	U	4.5	U	3.7	U
alpha-Chlordane	2.5	U	2.2	U	2.1	U	2.3	U	1.9	U
gamma-Chlordane	2.5	U	2.2	U	2.1	U	2.3	U	1.9	U
Toxaphene	250	U	220	U	210	U	230	U	190	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0056		E0057		E0057MS		E0058		E0060	
Sampling Location :	X110		X111		X111		X112		X113	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/22/2008		4/22/2008				4/22/2008		4/22/2008	
Time Sampled :										
%Moisture :	31		14		14		14		33	
pH :	5.3		4.9		4.9		5.1		5.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	2.5	U	2.0	U	2.0	U	2.0	U	2.5	U
beta-BHC	2.5	U	2.0	U	2.0	U	2.0	U	2.5	U
delta-BHC	5.2		2.6	J	2.0	U	2.0	U	2.5	U
gamma-BHC (Lindane)	2.5	U	2.0	U	17		2.0	U	2.5	U
Heptachlor	2.5	U	2.0	U	15		2.0	U	2.5	U
Aldrin	2.5	U	2.0	U	14		2.0	U	2.5	U
Heptachlor epoxide	2.5	U	2.0	U	2.0	U	2.0	U	2.5	U
Endosulfan I	2.5	U	2.0	U	2.0	U	2.0	U	2.5	U
Dieldrin	4.8	U	3.8	U	26		3.8	U	4.9	U
4,4'-DDE	4.8	U	3.8	U	3.8	U	3.8	U	4.9	U
Endrin	4.8	U	3.8	U	32		3.8	U	4.9	U
Endosulfan II	4.8	U	3.8	U	3.8	U	3.8	U	4.9	U
4,4'-DDD	4.8	U	3.8	U	3.8	U	3.8	U	4.9	U
Endosulfan sulfate	4.8	U	3.8	U	3.8	U	3.8	U	4.9	U
4,4'-DDT	7.5		3.7	J	27		3.8	U	4.9	U
Methoxychlor	25	U	20	U	20	U	20	U	25	U
Endrin ketone	4.8	U	3.8	U	3.8	U	3.8	U	4.9	U
Endrin aldehyde	4.8	U	3.8	U	3.8	U	3.8	U	4.9	U
alpha-Chlordane	2.5	U	2.0	U	2.0	U	2.0	U	2.5	U
gamma-Chlordane	2.5	U	2.0	U	2.0	U	2.0	U	2.5	U
Toxaphene	250	U	200	U	200	U	200	U	250	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0061	E0062		E0064		E0065		E0067		
Sampling Location :	X114	X115		X201		X116		X117		
Matrix :	Soil	Soil		Soil		Soil		Soil		
Units :	ug/Kg	ug/Kg		ug/Kg		ug/Kg		ug/Kg		
Date Sampled :	4/22/2008	4/22/2008		4/22/2008		4/22/2008		4/22/2008		
Time Sampled :										
%Moisture :	44	44		13		13		63		
pH :	5.6	5.7		5.3		6.1		5.3		
Dilution Factor :	1.0	1.0		1.0		1.0		1.0		
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	3.0	U	3.0	U	1.9	U	1.9	U	4.6	U
beta-BHC	3.0	U	3.0	U	1.9	U	1.9	U	4.6	U
delta-BHC	3.0	U	3.0	U	1.9	U	1.9	U	4.6	U
gamma-BHC (Lindane)	3.0	U	3.0	U	1.9	U	1.9	U	4.6	U
Heptachlor	3.0	U	3.0	U	1.9	U	1.9	U	4.6	U
Aldrin	3.0	U	3.0	U	1.9	U	1.9	U	4.6	U
Heptachlor epoxide	3.0	U	3.0	U	1.9	U	1.9	U	4.6	U
Endosulfan I	3.0	U	3.0	U	1.9	U	1.9	U	4.6	U
Dieldrin	5.9	U	5.9	U	3.8	U	3.8	U	8.9	U
4,4'-DDE	5.9	U	5.9	U	3.8	U	3.8	U	9.2	
Endrin	5.9	U	5.9	U	3.8	U	3.8	U	8.9	U
Endosulfan II	5.9	U	5.9	U	3.8	U	3.8	U	8.9	U
4,4'-DDD	5.9	U	5.9	U	3.8	U	3.8	U	8.9	U
Endosulfan sulfate	5.9	U	5.9	U	3.8	U	3.8	U	8.9	U
4,4'-DDT	5.9	U	5.9	U	3.8	U	3.8	U	3.2	J
Methoxychlor	30	U	30	U	19	U	19	U	46	U
Endrin ketone	5.9	U	5.9	U	3.8	U	3.8	U	8.9	U
Endrin aldehyde	5.9	U	5.9	U	3.8	U	3.8	U	8.9	U
alpha-Chlordane	3.0	U	3.0	U	1.9	U	1.9	U	4.6	U
gamma-Chlordane	3.0	U	3.0	U	1.9	U	1.9	U	4.6	U
Toxaphehe	300	U	300	U	190	U	190	U	460	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0072		E0073		PBLK60		PBLK64			
Sampling Location :	X118		X119							
Matrix :	Soil		Soil		Soil		Soil			
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :	4/23/2008		4/23/2008							
Time Sampled :										
%Moisture :	18		22		0		0			
pH :	6.3		5.9							
Dilution Factor :	1.0		1.0		1.0		1.0			
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	2.1	U	2.2	U	1.7	U	1.7	U		
beta-BHC	2.1	U	2.2	U	1.7	U	1.7	U		
delta-BHC	2.1	U	2.2	U	1.7	U	1.7	U		
gamma-BHC (Lindane)	2.1	U	2.2	U	1.7	U	1.7	U		
Heptachlor	2.1	U	2.2	U	1.7	U	1.7	U		
Aldrin	2.1	U	2.2	U	1.7	U	1.7	U		
Heptachlor epoxide	2.1	U	2.2	U	1.7	U	1.7	U		
Endosulfan I	2.1	U	2.2	U	1.7	U	1.7	U		
Dieldrin	4.0	U	4.2	U	3.3	U	3.3	U		
4,4'-DDE	3.0	J	4.2	U	3.3	U	3.3	U		
Endrin	4.0	U	4.2	U	3.3	U	3.3	U		
Endosulfan II	4.0	U	4.2	U	3.3	U	3.3	U		
4,4'-DDD	3.8	J	4.2	U	3.3	U	3.3	U		
Endosulfan sulfate	4.0	U	4.2	U	3.3	U	3.3	U		
4,4'-DDT	2.5	J	4.2	U	3.3	U	3.3	U		
Methoxychlor	21	U	22	U	17	U	17	U		
Endrin ketone	4.0	U	4.2	U	3.3	U	3.3	U		
Endrin aldehyde	4.0	U	4.2	U	3.3	U	3.3	U		
alpha-Chlordane	2.1	U	2.2	U	1.7	U	1.7	U		
gamma-Chlordane	2.1	U	2.2	U	1.7	U	1.7	U		
Toxaphene	210	U	220	U	170	U	170	U		

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Number of Soil Samples : 20

Number of Water Samples : 0

Number of Sediment Samples : 0

Date :

Sample Number :	ABLK59		ABLK63		E0047		E0048		E0049	
Sampling Location :					X101		X102		X103	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :					4/21/2008		4/21/2008		4/21/2008	
Time Sampled :										
%Moisture :	0		0		28		4		14	
pH :					5.1		4.9		5.3	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	33	U	33	U	46	U	34	U	38	U
Aroclor-1221	33	U	33	U	46	U	34	U	38	U
Aroclor-1232	33	U	33	U	46	U	34	U	38	U
Aroclor-1242	33	U	33	U	46	U	34	U	38	U
Aroclor-1248	33	U	33	U	46	U	34	U	38	U
Aroclor-1254	33	U	33	U	46	U	34	U	38	U
Aroclor-1260	33	U	33	U	21	J	34	U	19	J
Aroclor-1262	33	U	33	U	46	U	34	U	38	U
Aroclor-1268	33	U	33	U	46	U	34	U	38	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0050	E0050MS	E0050MSD	E0051	E0052					
Sampling Location :	X104	X104	X104	X105	X106					
Matrix :	Soil	Soil	Soil	Soil	Soil					
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Date Sampled :	4/21/2008			4/21/2008	4/21/2008					
Time Sampled :										
%Moisture :	16	16	16	32	23					
pH :	5.8	5.8	5.8	5.6	5.3					
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	39	U	220		230		48	U	42	U
Aroclor-1221	39	U	39	U	39	U	48	U	42	U
Aroclor-1232	39	U	39	U	39	U	48	U	42	U
Aroclor-1242	39	U	39	U	39	U	48	U	42	U
Aroclor-1248	39	U	220		220		48	U	42	U
Aroclor-1254	39	U	39	U	39	U	48	U	42	U
Aroclor-1260	39	U	170		190		48	U	42	U
Aroclor-1262	39	U	39	U	39	U	48	U	42	U
Aroclor-1268	39	U	39	U	39	U	48	U	42	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0053	E0054	E0055	E0056	E0057					
Sampling Location :	X107	X108	X109	X110	X111					
Matrix :	Soil	Soil	Soil	Soil	Soil					
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Date Sampled :	4/21/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008					
Time Sampled :										
%Moisture :	20	26	11	31	14					
pH :	5.6	5.7	5.6	5.3	4.9					
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	41	U	44	U	68	J	90		110	J
Aroclor-1221	41	U	44	U	37	U	47	U	38	U
Aroclor-1232	41	U	44	U	37	U	47	U	38	U
Aroclor-1242	41	U	44	U	37	U	47	U	38	U
Aroclor-1248	41	U	44	U	110		130		150	J
Aroclor-1254	41	U	44	U	37	U	47	U	38	U
Aroclor-1260	41	U	44	U	37	U	47	U	38	U
Aroclor-1262	41	U	44	U	37	U	47	U	38	U
Aroclor-1268	41	U	44	U	37	U	47	U	38	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0058	E0060	E0061	E0062	E0064					
Sampling Location :	X112	X113	X114	X115	X201					
Matrix :	Soil	Soil	Soil	Soil	Soil					
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
Date Sampled :	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008					
Time Sampled :										
%Moisture :	14	33	44	44	13					
pH :	5.1	5.9	5.6	5.7	5.3					
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	38	U	49	U	59	U	59	U	38	U
Aroclor-1221	38	U	49	U	59	U	59	U	38	U
Aroclor-1232	38	U	49	U	59	U	59	U	38	U
Aroclor-1242	38	U	49	U	59	U	59	U	38	U
Aroclor-1248	38	U	21	J	59	U	59	U	38	U
Aroclor-1254	38	U	49	U	59	U	59	U	38	U
Aroclor-1260	38	U	49	U	59	U	59	U	38	U
Aroclor-1262	38	U	49	U	59	U	59	U	38	U
Aroclor-1268	38	U	49	U	59	U	59	U	38	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0047

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0065	E0067	E0072	E0073						
Sampling Location :	X116	X117	X118	X119						
Matrix :	Soil	Soil	Soil	Soil						
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg						
Date Sampled :	4/22/2008	4/22/2008	4/23/2008	4/23/2008						
Time Sampled :										
%Moisture :	13	63	18	22						
pH :	6.1	5.3	6.3	5.9						
Dilution Factor :	1.0	1.0	1.0	1.0						
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	38	U	89	U	40	U	42	U		
Aroclor-1221	38	U	89	U	40	U	42	U		
Aroclor-1232	38	U	89	U	40	U	42	U		
Aroclor-1242	38	U	89	U	40	U	42	U		
Aroclor-1248	38	U	89	U	40	U	42	U		
Aroclor-1254	38	U	89	U	40	U	42	U		
Aroclor-1260	38	U	89	U	40	U	42	U		
Aroclor-1262	38	U	89	U	40	U	42	U		
Aroclor-1268	38	U	89	U	40	U	42	U		



National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)	SDG E0047	Case 37407	Contract EPW05032	Region 5	DDTID 59098	SOW SOM01.2
<i>Tentatively identified Compounds</i>						
VOA Low Med	Sample=E0047	Location=X101	Matrix=Soil	Level=LOW		

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

4:03 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0047RE Location=No TR data Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0048 Location=X102 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	11.96	6.1	J



## National Functional Guidelines Report # 9

Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

Lab KAP (KAP Technologies Inc) SDG E0047

Case 37407

Sample=E0048RE

Location=No TR data

Matrix=Soil

Level=LOW

*Tentatively identified Compounds*

VOA Low Med

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000556-67-2	Cyclotetrasiloxane, octamethyl-	15.34	16	NJ
	Unknown-02	16.71	13	J
	Unknown-03	17.13	8.8	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0049 Location=X103 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)    SDG E0047    Case 37407    Contract EPW05032    Region 5    DDTID 59098    SOW SOM01.2

***Tentatively identified Compounds***

VOA Low Med    Sample=E0050    Location=X104    Matrix=Soil    Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)	SDG E0047	Case 37407	Contract EPW05032	Region 5	DDTID 59098	SOW SOM01.2
<b><i>Tentatively identified Compounds</i></b>						
VOA Low Med	Sample=E0051	Location=X105	Matrix=Soil	Level=LOW		

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

4:03 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0052 Location=X106 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0052RE Location=No IR data Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000556-67-2	Cyclotetrasiloxane, octamethyl-	15.35	12	NJ



National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)	SDG E0047	Case 37407	Contract EPW05032	Region 5	DDTID 39098	SOW SOM01.2
<b><i>Tentatively identified Compounds</i></b>						
VOA Low Med	Sample=E0053	Location=X107	Matrix=Soil	Level=LOW		

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)    SDG E0047    Case 37407    Contract EPW05032    Region 5    DDTID 59098    SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med    Sample=E0054    Location=X108    Matrix=Soil    Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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# National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)	SDG E0047	Case 37407	Contract EPW05032	Region 5	DDTID 59098	SOW SOM01.2
Tentatively identified Compounds						
VOA Low Med		Sample=E0055	Location=X109	Matrix=Soil	Level=LOW	

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0056 Location=X110 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)    SDG E0047    Case 37407    Contract EPW05032    Region 5    DDTID 59098    SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med    Sample=E0057    Location=X111    Matrix=Soil    Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)	SDG E0047	Case 37407	Contract EPW05032	Region 5	DDTID 59098	SOW SOM01.2
<b><i>Tentatively identified Compounds</i></b>						
VOA Low Med		Sample=E0058	Location=X112	Matrix=Soil	Level=LOW	

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)	SDG E0047	Case 37407	Contract EPW05032	Region 5	DDTID 59098	SOW SOM01.2
<i>Tentatively identified Compounds</i>						
VOA Low Med	Sample=E0060	Location=X113	Matrix=Soil	Level=LOW		

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0061 Location=X114 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	16.53	200	J
1000152-47-3	trans-Decalin, 2-methyl-	18.51	190	NJ
004292-92-6	Cyclohexane, pentyl-	18.72	200	NJ
	Unknown-03	18.89	260	J
	Unknown-04	19.64	180	J
	Unknown-05	19.72	290	J
	Unknown-06	20.18	210	J
006682-71-9	1H-Indene, 2,3-dihydro-4,7-dimethyl-	20.54	260	NJ
	Unknown-07	20.75	510	J
	Unknown-08	20.96	170	J
	Unknown-09	21.31	150	J
	Unknown-10	21.6	200	J
	Unknown-11	21.68	170	J
	Unknown-12	21.79	290	J
	Unknown-13	21.98	320	J
	Unknown-14	22.12	150	J
	Unknown-15	22.51	330	J
	Unknown-16	22.65	350	J
	Unknown-17	23.23	170	J
	Unknown-18	23.48	340	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0062 Location=X115 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	20.75	74	J
	Unknown-03	20.76	64	J
	Unknown-04	21.59	62	J
	Unknown-05	21.69	96	J
	Unknown-06	21.86	62	J
	Unknown-07	21.9	63	J
	Unknown-08	21.94	60	J
	Unknown-09	21.98	150	J
	Unknown-10	22.12	51	J
	Unknown-11	22.26	66	J
	Unknown-12	22.51	140	J
	Unknown-13	22.66	260	J
	Unknown-14	22.81	61	J
	Unknown-15	22.88	110	J
	Unknown-16	23.24	70	J
	Unknown-18	23.46	66	J
	Unknown-17	23.46	80	J
	Unknown-19	23.49	110	J
	Unknown-20	23.56	70	J
	Unknown-21	23.74	68	J



## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0064 Location=X201 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	18.78	6.3	J
	Unknown-03	21.19	6.8	J
	Unknown-04	22.66	13	J
	Unknown-05	22.89	9.0	J
	Unknown-06	23.49	7.6	J
	Unknown-07	23.57	8.8	J

National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)    SDG E0047    Case 37407    Contract EPW05032    Region 5    DDTID 59098    SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med    Sample=E0065    Location=X116    Matrix=Soil    Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0067 Location=X117 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0072 Location=X118 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	22.64	140	J
	Unknown-03	22.87	96	J
	Unknown-04	23.44	140	J
	Unknown-05	23.48	100	J
	Unknown-06	23.53	110	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0072RE Location=No TR data Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	15.32	9.9	J

National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)	SDG E0047	Case 37407	Contract EPW05032	Region 5	DDTID 59098	SOW SOM01.2
<b><i>Tentatively identified Compounds</i></b>						
VOA Low Med	Sample=E0073	Location=X119	Matrix=Soil	Level=LOW		

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=VBLKAB Location=No TR data Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	10.34	100	UG/KG J
000556-67-2	Cyclotetrasiloxane, octamethyl	15.35	12	NJ

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=VBLKAD Location=No TR data Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	10.33	96	UG/KG J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=VBLKAF Location=No TR data Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	10.31	97	UG/KG J



## National Functional Guidelines Report # 9

SOW SOM01.2

DDTID 59098

Region 5

Contract EPW05032

Case 37407

SDG E0047

Lab KAP (KAP Technologies Inc)

*Tentatively identified Compounds*

Level=LOW

Matrix=Soil

Location=No TR data

Sample=VBLKAH

VOA Low Med

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000110-54-3	Hexane	4.63	5.9	UG/KG NJ
	Unknown-01	10.3	96	J

National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)	SDG E0047	Case 37407	Contract EPW05032	Region 5	DDTID 59098	SOW SOM01.2
Tentatively identified Compounds						
VOA	Low	Med	Sample=VHBLK01	Location=No TR data	Matrix=Soil	Level=LOW

Unknown-01	10.31	99	UG/KG	J
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## National Functional Guidelines Report # 9

4:03 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2  
*Tentatively identified Compounds*  
BNA Sample=E0047 Location=X101 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	17.35	290	UG/KG J
	Unknown-02	17.56	320	J
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	17.78	410	NJ
	Unknown-03	18.13	250	J
	Unknown-04	18.3	330	J
	Unknown-05	18.6	380	J
	Unknown-06	19.69	460	J
	Unknown-07	19.95	300	J



## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0048 Location=X102 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
013187-99-0	2-Bromo dodecane	17.27	380	UG/KG NJ
	Unknown-01	17.72	130	J
	Unknown-02	18.11	150	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

## Tentatively Identified Compounds

BNA Sample=E0049 Location=X103 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
013798-23-7	Sulfur	12.79	110	NJ
000486-25-9	9H-Fluoren-9-one	14.37	110	NJ
002531-84-2	Phenanthrene, 2-methyl-	15.18	270	NJ
000610-48-0	Anthracene, 1-methyl-	15.21	260	NJ
001961-96-2	1H-Indene, 1-phenyl-	15.25	130	NJ
	Unknown-02	15.3	390	J
	Unknown-03	15.33	180	J
	Unknown-04	15.41	150	J
035465-71-5	2-Phenyl-naphthalene	15.51	260	NJ
000084-65-1	9,10-Anthracenedione	15.53	240	NJ
	Unknown-05	15.67	190	J
001576-69-8	Phenanthrene, 2,7-dimethyl-	15.71	320	NJ
000781-43-1	9,10-Dimethylanthracene	15.79	290	NJ
	Unknown-06	15.83	160	J
	Unknown-07	15.87	210	J
000243-17-4	1H-Benzo[b]fluorene	16.53	230	NJ
003353-12-6	Pyrene, 4-methyl-	16.64	120	NJ
	Unknown-08	16.98	140	J
000082-05-3	7H-Benz[de]anthracen-7-one	17.06	260	NJ
000479-79-8	1H-Benzo[a]fluoren-11-one	17.27	190	NJ
	Unknown-09	17.56	140	J
	Unknown-10	17.66	140	J
001606-67-3	1-Aminopyrene	17.72	110	NJ
001705-84-6	Triphenylene, 2-methyl-	17.92	190	NJ
003351-31-3	Chrysene, 3-methyl-	17.96	130	NJ
000207-08-9	Benzo[k]fluoranthene	18.97	270	NJ
	Unknown-11	19.13	170	J
1000159-49-7	Diboron(mu-selenium)diethylbis(mu-(1H-pyrazolato-N,N))	19.7	120	NJ
	Unknown-12	19.78	150	J

## National Functional Guidelines Report # 9

4:03 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0050 Location=X104 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	16.69	300	UG/KG J
024360-63-2	Benzo[b]naphtho[2,3-d]thiophene, 6-methyl-	17.35	330	NJ
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	17.78	410	NJ
	Unknown-02	18.1	580	J
000205-99-2	Benz[e]acephenanthrylene	18.57	520	NJ
	Unknown-03	19.14	300	J
000220-97-3	11H-Indeno[2,1-a]phenanthrene	19.24	460	NJ
	Unknown-04	19.69	310	J
	Unknown-05	19.95	400	J
	Unknown-06	20.78	370	J
000215-58-7	Benzo[b]triphenylene	21.32	340	NJ
000191-26-4	Dibenzo[def,mno]chrysene	21.89	350	NJ

## National Functional Guidelines Report # 9

Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

Lab KAP (KAP Technologies Inc)

SDG E0047

*Tentatively identified Compounds*

BNA Sample=E0051 Location=X105 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	10.35	110	UG/KG J
	Unknown-03	18.45	110	J



## National Functional Guidelines Report # 9

SOW SOM01.2

DDTID 59098

Region 5

Contract EPW05032

Case 37407

SDG E0047

Lab KAP (KAP Technologies Inc)

*Tentatively identified Compounds*

BNA Sample=E0052 Location=X106 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	17.87	130	J
	Unknown-03	18.25	270	J
	Unknown-04	18.94	220	J
	Unknown-06	20.21	110	J
	Unknown-05	20.21	120	J
	Unknown-07	22.61	86	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0053 Location=X107 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	16.61	330	UG/KG J
	Unknown-02	16.81	320	J
	Unknown-03	17.35	330	J
	Unknown-04	17.55	320	J
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	17.78	630	NJ
	Unknown-05	18.1	840	J
000050-32-8	Benzo[a]pyrene	18.45	440	NJ
	Unknown-06	18.55	410	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)	SDG E0047	Case 37407	Contract EPW05032	Region 5	DDTID 59098	SOW SOM01.2
<b><i>Tentatively identified Compounds</i></b>						
BNA	Sample=E0054	Location=X108	Matrix=SOIL	Level=LOW		

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	18.82	120	J
	Unknown-03	18.84	120	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0055 Location=X109 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
002531-84-2	Phenanthrene, 2-methyl-	15.2	100	NJ
	Unknown-02	15.34	110	J
	Unknown-03	15.74	91	J
003674-65-5	Phenanthrene, 2,3-dimethyl-	15.78	110	NJ
000781-92-0	Anthracene, 1,4-dimethyl-	15.78	86	NJ
	Unknown-04	16.95	170	J
	Unknown-05	16.96	97	J
	Unknown-06	17.04	88	J
	Unknown-07	17.16	90	J
	Unknown-08	17.26	85	J
003697-24-3	Chrysene, 6-methyl-	17.9	170	NJ
	Unknown-09	18.2	110	J
	Unknown-10	18.23	170	J
	Unknown-11	18.56	85	J
000207-93-2	Dinaphtho[1,2-b:1',2'-d]furan	19.06	600	NJ
	Unknown-12	19.16	250	J
000556-71-8	Cyclononasiloxane, octadecamethyl-	20.17	500	NJ
000556-71-8	Cyclononasiloxane, octadecamethyl-	20.18	530	NJ
	Unknown-13	20.19	220	J
	Unknown-14	22.72	110	J



## National Functional Guidelines Report # 9

SOW SOM01.2

DDTID 59098

Region 5

Contract EPW05032

Case 37407

SDG E0047

Lab KAP (KAP Technologies Inc)

*Tentatively Identified Compounds*

BNA Sample=E0056 Location=X110 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	15.2	220	J
	Unknown-03	15.74	170	J
	Unknown-04	16	180	J
	Unknown-06	16.92	190	J
	Unknown-05	16.92	180	J
	Unknown-07	17.04	210	J
	Unknown-08	17.16	190	J
	Unknown-09	17.26	170	J
	Unknown-10	17.78	160	J
001705-85-7	Chrysene, 6-methyl-	17.91	190	NJ
000207-93-2	Dinaphtho[1,2-b:1',2'-d]furan	19.07	1100	NJ
000207-93-2	Dinaphtho[1,2-b:1',2'-d]furan	19.17	530	NJ
	Unknown-11	19.6	180	J
	Unknown-12	19.89	200	J
	Unknown-13	20.48	160	J
	Unknown-14	20.7	150	J
	Unknown-15	21.15	190	J
	Unknown-16	21.16	260	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDITD 59098 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0057 Location=X111 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000108-67-8	Benzene, 1,3,5-trimethyl-	5.27	470	UG/KG NJ
000526-73-8	Benzene, 1,2,3-trimethyl-	5.69	580	NJ
000095-63-6	Benzene, 1,2,4-trimethyl-	6.17	690	NJ
000135-01-3	Benzene, 1,2-diethyl-	6.6	900	NJ
001074-43-7	Benzene, 1-methyl-3-propyl-	6.62	1200	NJ
021195-59-5	1,3,8-P-Menthatriene	6.69	720	NJ
000527-84-4	Benzene, 1-methyl-2-(1-methylethyl)-	6.75	2200	NJ
001758-88-9	Benzene, 2-ethyl-1,4-dimethyl-	7.06	1000	NJ
000535-77-3	Benzene, 1-methyl-3-(1-methylethyl)-	7.09	1600	NJ
000527-84-4	Benzene, 1-methyl-2-(1-methylethyl)-	7.54	750	NJ
000095-93-2	Benzene, 1,2,4,5-tetramethyl-	7.69	1900	NJ
000488-23-3	Benzene, 1,2,3,4-tetramethyl-	7.76	3000	NJ
002050-24-0	Benzene, 1,3-diethyl-5-methyl-	8.1	570	NJ
	Unknown-01	8.13	1300	J
000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	8.27	1200	NJ
001595-16-0	Benzene, 1-methyl-4-(1-methylpropyl)-	8.38	520	NJ
001595-16-0	Benzene, 1-methyl-4-(1-methylpropyl)-	8.6	1200	NJ
004706-89-2	Benzene, 2,4-dimethyl-1-(1-methylethyl)-	8.96	1600	NJ
000700-12-9	Benzene, pentamethyl-	9	1100	NJ
004706-89-2	Benzene, 2,4-dimethyl-1-(1-methylethyl)-	9.14	930	NJ
004706-90-5	Benzene, 1,3-dimethyl-5-(1-methyl	10.21	1300	NJ
000089-74-7	Ethanone, 1-(2,4-dimethylphenyl)-	10.73	580	NJ
000832-69-9	Phenanthrene, 1-methyl-	15.2	500	NJ
	Unknown-02	16.57	760	J
	Unknown-03	18.59	750	J
000556-71-8	Cyclononasiloxane, octadecamethyl-	20.2	760	NJ
	Unknown-04	21.31	730	J
	Unknown-05	22.74	570	J

## National Functional Guidelines Report # 9

SOW SOM01.2

DDTID 59098

Region 5

Contract EPW05032

Case 37407

SDG E0047

Lab KAP (KAP Technologies Inc)

*Tentatively identified Compounds*

BNA Sample=E0058 Location=X112 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	15.34	130	J
	Unknown-03	15.51	130	J
	Unknown-04	15.64	100	J
000629-93-6	Octadecane, 1-iodo-	15.84	100	NJ
	Unknown-05	17.5	130	J
	Unknown-06	18.04	190	J
	Unknown-07	18.05	170	J
	Unknown-08	18.25	430	J
000112-84-5	13-Docosenamide, (Z)-	18.44	120	NJ
	Unknown-09	18.81	150	J
	Unknown-11	18.84	200	J
000192-97-2	Benzofelpyrene	18.84	250	NJ
	Unknown-12	18.84	180	J
	Unknown-10	18.84	230	J
	Unknown-13	21.61	88	J
	Unknown-14	22.25	120	J
	Unknown-15	22.25	150	J

## National Functional Guidelines Report # 9

Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

Lab KAP (KAP Technologies Inc) SDG E0047

*Tentatively identified Compounds*

BNA Sample=E0060 Location=X113 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	15.21	110	J
	Unknown-03	15.34	170	J
	Unknown-04	15.8	120	J
	Unknown-05	17.26	140	J
	Unknown-06	17.58	140	J
	Unknown-07	17.76	150	J
	Unknown-08	17.91	260	J
	Unknown-09	17.96	140	J
	Unknown-10	18.25	230	J
037574-47-3	Benzo(a)pyrene 4,5-oxide	19.07	150	NJ
	Unknown-11	19.07	130	J
	Unknown-12	19.5	370	J
	Unknown-13	19.61	310	J
	Unknown-14	19.71	340	J
	Unknown-15	19.92	100	J



## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0061 Location=X114 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	9.55	570	UG/KG J
	Unknown-02	9.88	700	J
	Unknown-03	10.01	1600	J
	Unknown-04	10.1	560	J
	Unknown-05	10.29	890	J
	Unknown-06	10.57	840	J
	Unknown-07	10.66	2000	J
	Unknown-08	12.22	630	J
	Unknown-09	12.51	530	J
	Unknown-10	12.67	1000	J
	Unknown-11	12.89	520	J
	Unknown-12	13.12	830	J
	Unknown-13	13.18	1600	J
	Unknown-14	13.52	550	J
	Unknown-15	15.84	1400	J
006566-19-4	10,18-Bisnorabieta-5,9(10),11,13-pentaene	16.06	730	NJ
	Unknown-16	16.09	690	J
	Unknown-17	16.3	770	J
	Unknown-18	17.08	670	J
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	18.11	640	NJ

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0062 Location=X115 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	UG/KG	Lab Qualifier
002883-02-5	Unknown-01	13.05	470	J	J
	n-Nonylcyclohexane	13.07	520		NJ
	Unknown-02	13.14	830		J
	Unknown-03	13.2	480		J
	Unknown-04	15.21	780		J
	Unknown-05	15.3	460		J
00057-10-3	n-Hexadecanoic acid	15.3	1000		NJ
	Unknown-06	15.45	540		J
	Unknown-07	15.46	570		J
	Unknown-09	15.54	550		J
	Unknown-08	15.54	540		J
	Unknown-10	15.64	870		J
	Unknown-11	15.65	820		J
	Unknown-12	15.66	1200		J
	Unknown-13	15.7	610		J
	Unknown-14	15.76	1800		J
	Unknown-15	15.78	640		J
	Unknown-16	15.81	1600		J
	Unknown-17	15.81	920		J
	Unknown-18	15.83	860		J
	Unknown-19	15.83	480		J
010544-50-0	Cyclic octaatomic sulfur	15.83	610		NJ
	Unknown-20	15.84	670		J
	Unknown-21	15.98	550		J
	Unknown-22	16	610		J
	Unknown-23	16.04	640		J
	Unknown-24	16.82	720		J
	Unknown-25	17.24	830		J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0064 Location=X201 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
001560-89-0	Heptadecane, 2-methyl-	13.69	290	UG/KG NJ
035599-77-0	Tridecane, 1-iodo-	13.99	170	NJ
001921-70-6	Pentadecane, 2,6,10,14-tetramethyl-	14.03	340	NJ
	Unknown-01	14.24	180	J
004209-22-7	Triacotane, 1-bromo-	15.44	170	NJ
088373-58-4	D-A-Friedo-2,3-secooleanane-2,3-dioic acid, dimethyl ester, (4R)-	17.24	170	NJ
	Unknown-02	17.24	160	J
	Unknown-03	17.66	170	J
	Unknown-05	17.66	220	J
	Unknown-04	17.66	210	J
	Unknown-06	18.01	130	J
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	18.1	200	NJ
	Unknown-07	18.11	160	J

## National Functional Guidelines Report # 9

Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

Lab KAP (KAP Technologies Inc) SDG E0047

*Tentatively identified Compounds*

BNA Sample=E0065 Location=X116 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000486-25-9	9H-Fluoren-9-one	14.38	160	UG/KG NJ
	Unknown-01	14.47	220	J
	Unknown-02	15	110	J
	Unknown-03	15.18	140	J
	Unknown-04	15.21	240	J
	Unknown-05	15.3	110	J
	Unknown-06	15.33	130	J
	Unknown-07	15.51	160	J
	Unknown-08	15.54	130	J
003674-65-5	Phenanthrene, 2,3-dimethyl-	15.8	120	NJ
	Unknown-09	15.87	100	J
	Unknown-10	15.88	210	J
000238-84-6	11H-Benzo[a]fluorene	16.64	140	NJ
003353-12-6	Pyrene, 4-methyl-	16.74	130	NJ
002381-21-7	Pyrene, 1-methyl-	16.77	100	NJ
000479-79-8	11H-Benzo[a]fluoren-11-one	17.07	240	NJ
	Unknown-11	17.14	120	J
	Unknown-12	17.17	130	J
	Unknown-13	17.23	120	J
	Unknown-14	17.28	150	J
002541-69-7	Benz[a]anthracene, 7-methyl-	17.92	210	NJ
000192-97-2	Benzo[e]pyrene	19.26	190	NJ



## National Functional Guidelines Report # 9

SOW SOM01.2

DDTID 59098

Region 5

Contract EPW05032

Case 37407

SDG E0047

Lab KAP (KAP Technologies Inc)

## Tentatively identified Compounds

BNA Sample=E0067 Location=X117 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000090-02-8	Benzaldehyde, 2-hydroxy-	6.53	340	UG/KG NJ
	Unknown-01	10.44	260	J
000832-69-9	Phenanthrene, 1-methyl-	15.21	250	NJ
	Unknown-02	15.31	270	J
	Unknown-03	15.51	240	J
000084-65-1	9,10-Anthracenedione	15.54	220	NJ
005737-13-3	Cyclopenta(Def)phenanthrenone	15.88	250	NJ
	Unknown-04	16.01	330	J
002381-21-7	Pyrene, 1-methyl-	16.54	260	NJ
003442-78-2	Pyrene, 2-methyl-	16.64	250	NJ
000243-17-4	11H-Benzo[b]fluorine	16.77	280	NJ
000479-79-8	11H-Benzo[a]fluorene-11-one	17.07	490	NJ
	Unknown-05	17.17	230	J
	Unknown-06	17.28	380	J
	Unknown-07	17.34	220	J
000217-59-4	Triphenylene	17.57	300	NJ
	Unknown-08	17.66	270	J
	Unknown-09	17.72	240	J
000205-25-4	7H-Benzo[c]carbazole	17.72	250	NJ
002541-69-7	Benz[a]anthracene, 7-methyl-	17.92	420	NJ
	Unknown-10	17.97	260	J
000111-02-4	2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	18.66	390	NJ
	Unknown-11	18.98	330	J
000207-08-9	Benzo[k]fluoranthene	18.98	390	NJ
000192-97-2	Benzo[e]pyrene	19.26	620	NJ

## National Functional Guidelines Report # 9

Contract EPW05032 Region 5 DDITD 59098 SOW SOM01.2

Lab KAP (KAP Technologies Inc) SDG E0047

Case 37407

*Tentatively identified Compounds*

BNA Sample=E0072 Location=X118 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	17.35	600	UG/KG J
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	17.8	2900	NJ
	Unknown-02	17.94	590	J
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	18.07	590	NJ
	Unknown-03	18.32	810	J
000607-52-3	Naphthalene, 1,1'-oxybis-	18.54	730	NJ
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	18.6	1800	NJ
	Unknown-04	18.72	1600	J
	Unknown-05	18.78	1700	J
	Unknown-06	19.25	630	J
	Unknown-07	19.47	900	J
027980-52-5	9-Benzylidenexanthene	19.68	1500	NJ
	Unknown-08	19.92	1200	J
	Unknown-09	20.22	660	J
	Unknown-10	20.87	810	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0073 Location=X119 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	17.78	470	UG/KG NJ
	Unknown-01	18.1	440	J
	Unknown-02	18.46	450	J
	Unknown-03	19.08	420	J
	Unknown-04	20.85	370	J
	Unknown-05	21.02	540	J
	Unknown-06	21.57	700	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0047 Case 37407 Contract EPW05032 Region 5 DDTID 59098 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=SBLK69 Location=No TR data Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	10.43	70	UG/KG J



## National Functional Guidelines Report # 9

Case 37407    SDG E0047    Contract EPW05032    Region 5    DDTID 59098    SOW SOM01.2

*Tentatively identified Compounds*

BNA    Sample=SBLK72    Location=No TR data    Matrix=SOIL    Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	UG/KG	Lab Qualifier
	Unknown-01	17.57	120	J	
	Unknown-02	17.72	110	J	
	Unknown-03	17.92	110	J	
	Unknown-04	18.73	110	J	
000215-58-7	Benzo[b]triphenylene	21	200	NJ	

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

DATE:

SUBJECT: Review of Data  
Received for Review on 19 May 08

FROM: Stephen L. Ostrodka, Chief (SRT-4J)  
Superfund Field Services Section

TO: Data User: IEPA

We have reviewed the data for the following case:

SITE NAME: LAKE CALUMET SMELTING & REFINING (IL)

CASE NUMBER: 37407 SDG NUMBER: E0047

Number and Type of Samples: 20 soil samples

Sample Numbers: E0047-58; 60-62; 64-65; 67; 72-73

Laboratory: Kap Technologies Hrs for Review: \_\_\_\_\_

Following are our findings:

CC: Howard Pham  
Region 5 TPO  
Mail Code: SRT-4J



## Contract Laboratory Program

### Sample Delivery Group (SDG) Cover Sheet

SDG Number E0047

Laboratory Name Kap Technologies Inc Lab Code KAP

Contract No. EPW05032

Case No. 37407

Analysis Price \_\_\_\_\_ SDG Turnaround 21 Days

#### EPA Sample Numbers in SDG (Listed in Numerical Order)

1) E0047	7) E0053	13) E0060	19) E0072
2) E0048	8) E0054	14) E0061	20) E0073
3) E0049	9) E0055	15) E0062	21)
4) E0050	10) E0056	16) E0064	22)
5) E0051	11) E0057	17) E0065	23)
6) E0052	12) E0058	18) E0067	24)

First Sample in SDG

E0047

Last Sample in SDG

E0073

First Sample Receipt Date  
Date

04/22/08

Last Sample Receipt

04/24/08

**Note:** There are a maximum of 20 **field** samples [excluding Performance Evaluation (PE) samples] in an

SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature \_\_\_\_\_

Date 4/25/08



USEPA Contract Laboratory Program  
Organic Traffic Report & Chain of Custody Record

Case No:	L
DAS No:	E0047
SDG No:	EP0005032
For Lab Use Only	
Lab Contract No:	
Unit Price:	
Transfer To:	
Lab Contract No:	
Unit Price:	

Date Shipped:	4/21/2008	Sampler Signature:	<i>[Signature]</i>
Carrier Name:	UPS	Received By:	(Date / Time)
Airbill:	1Z6215892210082857		
Shipped to:	KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065		
			4-22-08
			9:30
			<i>[Signature]</i>

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0047	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55241, 5-55243 (2)	X101	S: 4/21/2008	ME0047	S-0.873.01
E0048	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55245, 5-55247 (2)	X102	S: 4/21/2008	ME0048	.02
E0049	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55249, 5-55250 (2)	X103	S: 4/21/2008	ME0049	.03
E0050	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55253, 5-55255 (2)	X104	S: 4/21/2008	ME0050	.04
E0051	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55257, 5-55259 (2)	X105	S: 4/21/2008	ME0051	.05
E0052	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55261, 5-55264 (2)	X106	S: 4/21/2008	ME0052	.06
E0053	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55267, 5-55268 (2)	X107	S: 4/21/2008	ME0053	.07

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 5°C	Chain of Custody Seal Number: 89308
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
ARO,PST,SV = CLP-SVOA, PEST/AROCLO-SOM, Encore = CLP-VOA-Encore				

TR Number: 5-162075208-042108-0002

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

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USEPA Contract Laboratory Program  
Organic Traffic Report & Chain of Custody Record

Case No: 37407

DAS No:

SDG No:

E0047

L

Date Shipped: 4/22/2008	Carrier Name: UPS	Airbill: 16215892210082866	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065
Chain of Custody Record		Sampler Signature: <i>[Signature]</i>	Relinquished By: <i>[Signature]</i>
1		Date / Time: 4/22/2008	Date / Time: 4/22/2008
2		Date / Time: 10:50	Date / Time: 10:50
3		Date / Time: 4:23:08	Date / Time: 4:23:08
4		Date / Time: 4:23:08	Date / Time: 4:23:08

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY SAMPLE Condition On Receipt
E0054	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55216 (Ice Only), 5-55270 (Ice Only) (2)	X108	S: 4/22/2008 9:20	ME0054 S-0874-01
E0055	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55219, 5-55221 (2)	X109	S: 4/22/2008 10:10	ME0055 .02
E0056	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55224 (Ice Only), 5-55225 (Ice Only) (2)	X110	S: 4/22/2008 10:10	ME0056 .03
E0057	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55228 (Ice Only), 5-55229 (Ice Only) (2)	X111	S: 4/22/2008 11:15	ME0057 .04
E0058	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55234 (Ice Only), 5-55235 (Ice Only) (2)	X112	S: 4/22/2008 11:15	ME0058 .05
E0060	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55239 (Ice Only), 5-55271 (Ice Only) (2)	X113	S: 4/22/2008 13:00	ME0060 .06
E0061	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55274, 5-55275 (Ice Only) (2)	X114	S: 4/22/2008 14:10	ME0061 .07
E0062	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55278 (Ice Only), 5-55279 (Ice Only) (2)	X115	S: 4/22/2008 14:10	ME0062 .08
E0064	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-55282, 5-55283 (Ice Only), 5-55284 (Ice Only) (3)	X201	S: 4/22/2008 15:30	ME0064 .09
E0065	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-55286 (Ice Only), 5-55287 (Ice Only) (2)	X116	S: 4/22/2008 16:25	ME0065 .10

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC: E0057, E0066	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 2-5°C	Chain of Custody Seal Number: 893/3 893/2
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
ARO,PST,SV = CLP-SVOA, PEST/AROCLO-SOM, CLP-PEST/P = CLP-Pesticides/Aroclor-SOM, Encore = CLP-VOA-Encore, SVOA-SOM = CLP-SVOA-SOM, VOA-SOM = CLP-VOA-SOM				



USEPA Contract Laboratory Program  
Organic Traffic Report & Chain of Custody Record

Case No: 37407

DAS No:

SDG No:

E0047

Date Shipped: 4/22/2008	Carrier Name: UPS	Airbill: 126215892210082866	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065
Chain of Custody Record		Sampler Signature: <i>[Signature]</i>	Received By: <i>[Signature]</i>
Relinquished By		(Date / Time)	
1 <i>[Signature]</i>		4/22/2008 17:00	
2			
3			
4			

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
--------------------	-----------------	------------	----------------------	--------------------------------	------------------	--------------------------	----------------------	--

E0066	Ground Water/ Jerry Willman	L/G	CLP-PEST/P (21), SVOA-SOM (21), VOA-SOM (21)	5-264055 (Ice Only), 5-277441 (HCL), 5-277446 (Ice Only), 5-277447 (Ice Only), 5-277448 (Ice Only), 5-277449 (Ice Only), 5-277450 (Ice Only), 5-55296 (HCL), 5-55297 (HCL), 5-55298 (HCL), 5-55299 (HCL), 5-55300 (HCL) (12)	G101	S: 4/22/2008 15:40	ME0066	
E0067	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-277443 (Ice Only), 5-277444 (Ice Only) (2)	X117	S: 4/22/2008 17:10	ME0067	S-0874-11

ORIGINAL  
Case 37407 SDG E0047  
Episode: S-0874 init/date 4/23/08

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: E0057, E0066	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 2.5C	Chain of Custody Seal Number: 89313 89311
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
ARO,PST,SV = CLP-SVOA, PEST/AROCLO-SOM, CLP-PEST/P = CLP-Pesticides/Aroclor-SOM, Encore = CLP-VOA-Encore, SVOA-SOM = CLP-SVOA-Encore, SVOA-SOM = CLP-SVOA-SOM, VOA-SOM = CLP-VOA-SOM				

TR Number: 5-162075208-042208-0004

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602



USEPA Contract Laboratory Program  
Organic Traffic Report & Chain of Custody Record

Date Shipped: 4/23/2008		Case No: 37407	
Carrier Name: UPS		DAS No: L	
Airbill: 126215892210027130		SDG No: E0047	
Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065		For Lab Use Only	
Relinquished By: [Signature]		Lab Contract No: EPW05032	
1 [Signature]		Unit Price:	
2 [Signature]		Transfer To:	
3 [Signature]		Lab Contract No:	
4 [Signature]		Unit Price:	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0070	Ground Water/ Jerry Willman	L/G	VOA-SOM (21)	5-264064 (Ice Only), 5-264065 (Ice Only) (2)	TB101	S: 4/23/2008	8:45	
E0071	Field QC/ Jerry Willman	L/G	CLP-PEST/P (21), SVOA-SOM (21), VOA-SOM (21)	5-264068 (HCL), 5-264069 (HCL), 5-264070 (Ice Only), 5-264071 (Ice Only) (4)	FB101	S: 4/23/2008	9:00	ME0071
E0072	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264073 (Ice Only), 5-264074 (Ice Only) (2)	X118	S: 4/23/2008	9:00	ME0072
E0073	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264077 (Ice Only), 5-264078 (Ice Only) (2)	X119	S: 4/23/2008	9:00	ME0073
E0074	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264081 (Ice Only), 5-264082 (Ice Only) (2)	X120	S: 4/23/2008	10:25	ME0074
E0075	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264085 (Ice Only), 5-264086 (Ice Only) (2)	X121	S: 4/23/2008	11:00	ME0075
E0076	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-264090 (Ice Only), 5-264091 (Ice Only), 5-264092 (Ice Only) (3)	X202	S: 4/23/2008	12:40	ME0076
E0077	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-264094 (Ice Only), 5-264095 (Ice Only), 5-264096 (Ice Only) (3)	X203	S: 4/23/2008	12:40	ME0077
E0078	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-264098 (Ice Only), 5-264099 (Ice Only), 5-303479 (Ice Only) (3)	X204	S: 4/23/2008	13:20	ME0078
E0079	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-303481 (Ice Only), 5-303482 (Ice Only), 5-303483 (Ice Only) (3)	X205	S: 4/23/2008	13:45	ME0079

ORIGINAL  
Case 37407 SDG E0066  
Episode 5-0577 Init/Date 4/24/08

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 2 °C	Chain of Custody Seal Number: 89316 89317
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? Y	Shipment Intact? Y
ARO,PST,SV = CLP-SVOA, PEST/AROCOLOR-SOM, CLP-PEST/P = CLP-Pesticides/Aroclor-SOM, Encore = CLP-VOA-Encore, SVOA-SOM = CLP-SVOA-Encore, VOA-SOM = CLP-VOA-SOM				

TR Number: 5-162075208-042308-0004

PR provides preliminary results. Requests for preliminary results will increase analytical costs.  
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

LABORATORY COPY

**KAP TECHNOLOGIES, INC.****9391 Grogans Mill Rd, Suite A2 • The Woodlands, TX 77380 • Phone (281) 367-0065****Contract No. EPW05032****Case No. 37407****SDG No. E0047****SDG NARRATIVE****SAMPLE RECEIPT:**

**On 04/22/08 @ 09:30 A.M.** - Received one cooler via UPS with shipment number 1Z6215892210082857 and the cooler temperature was 3<sup>0</sup>C.

**On 04/23/08 @ 10:30 A.M.** - Received one cooler via UPS with shipment number 1Z6215892210027112 and the cooler temperature was 2.5<sup>0</sup>C.

**On 04/24/08 @ 10:15 A.M.** - Received one cooler via UPS with shipment number 1Z6215892210027158 and the cooler temperature was 2<sup>0</sup>C.

The cooler contained the following samples for VOA, BNA, PEST and AROCLOR analyses.  
The custody seals and the samples were intact.

<b>EPA SAMPLE ID</b>	<b>pH</b>	<b>EPA SAMPLE ID</b>	<b>pH</b>
E0047	NA	E0057	NA
E0048	NA	E0058	NA
E0049	NA	E0060	NA
E0050	NA	E0061	NA
E0051	NA	E0062	NA
E0052	NA	E0064	NA
E0053	NA	E0065	NA
E0054	NA	E0067	NA
E0055	NA	E0072	NA
E0056	NA	E0073	NA
E0047MS	NA	E0047MSD	NA
E0047RE	NA	E0048RE	NA
E0052RE	NA	E0072RE	NA

No problems were encountered during sample receiving and login.

**VOA SOIL SAMPLE:**

The sample for Low-Med-VOA was analyzed on instrument B-5973 GC/MS using a 30 meters long RTX-VMS column having a 0.25mm ID and 3µm film thickness. The trap used was OV-1/Tenax/Silica Gel (Tekmar #6 CAT #14-1755-003).



KAP TECHNOLOGIES, INC.

9391 Grogans Mill Rd, Suite A2 • The Woodlands, TX 77380 • Phone (281) 367-0065

Contract No. EPW05032

Case No. 37407

SDG No. E0047

**SDG NARRATIVE**

A 10 mL purge volume and heated purge was used for soil volatile sample analysis, blanks and calibration standards. The concentrations of the standards and spikes were maintained at the levels required by the Statement of Work (SOW).

The samples were analyzed for Volatiles according the SOM 1.2 statement of work.

The samples E0047, E0048, E0052 and E0072 had failed in surrogate recovery and/or internal standards and were reanalyzed. Upon reanalysis again failed due to matrix interference. Both the analyses were reported and are billable.

No problems were encountered during the analysis of this sample.

**The formula used to calculate the Sample concentration:**

**LOW-MED-VOA SOIL SAMPLE:**

$$\text{Concentration in ug/L} = \frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(W_s)(D)}$$

Where,

$A_x$  = Area of the characteristic ion (EICP) for the compound to be measured.

$A_{is}$  = Area of the characteristic ion (EICP) for the internal standard.

$I_s$  = Amount of internal standard added in ng.

$RRF$  = Mean relative Response Factor from the initial calibration standard.

$$D = \frac{100 - \% \text{ Moisture}}{100}$$

$W_s$  = Weight of sample added to the purge tube, in g.

**SEMIVOLATILES:**

The soil sample was extracted on 04/28/08 and 5/01/08 using sonication method as per statement of work SOM1.2. The sample was cleaned by the GPC. No problems were encountered during the extraction and analysis.

The samples were analyzed on instrument F-5973 GC/MS using a 30 meters long RTX-5MS column having a 0.25mm ID and 0.25µm film thickness.

KAP TECHNOLOGIES, INC.

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Contract No. EPW05032

Case No. 37407

SDG No. E0047

SDG NARRATIVE

**The formula used to calculate the Sample concentration:**

**SOIL SAMPLES:**

$$\text{Concentration of Soil, Sediment sample ug/kg} = \frac{(Ax)(Is)(Vt)(DF)(GPC)}{(Ais)(RRF)(Vi)(Ws)(D)}$$

Where,

Ax, Is, Vin, Vout are given for water, above.

Vt = Volume of concentrated extract in uL.

Vi = Volume of extract injected.

GPC = GPC cleaning Factor.

D =  $\frac{100 - \% \text{moisture}}{100}$

Ws = Weight of sample extract.

RRF = Mean relative Response Factor determined from the initial calibration standard.

DF = Dilution Factor.

**PESTICIDES:**

The Soil sample was extracted on 04/28/08 and 4/30/08 using sonication method as per statement of work SOM1.2. The soil sample was cleaned by GPC. After GPC clean up the extract was concentrated to a final volume of 5mL.

No problems were encountered during extraction and sample analyses.

1) RTX-CLP2: 30m\*0.53mmID\*0.41um film thickness. (Primary Column)

2) RTX-CLP: 30m\*0.53mmID\*0.50um film thickness. (Confirmation Column)

A 1uL injection was used.

The sample E0043 had high target compound concentrations above the calibrations and was analyzed using the dilution. Both the analyses were reported and are billable.

**The formula used to calculate the Sample concentration:**

**SOIL SAMPLES:**

$$\text{Concentration of Target compound in soil/sediment} = \frac{(Ax)(Vt)(DF)(GPC)}{(CF)(Vt)(Ws)(D)}$$

Where,

Ax = Response of the compound to be measured.

CF = Mean calibration factor from the initial calibration (area/ng)

KAP TECHNOLOGIES, INC.

9391 Grogans Mill Rd, Suite A2 • The Woodlands, TX 77380 • Phone (281) 367-0065

Contract No. EPW05032

Case No. 37407

SDG No. E0047

SDG NARRATIVE

Vt = 5,000 uL.

Vi = Volume of extract injected.

Ws = Weight of sample extracted.

GPC = GPC Factor

DF = Dilution Factor

100 - %moisture

D =  $\frac{\text{-----}}{100}$

**AROCLORS:**

The soil sample was extracted on 04/27/08 and 4/29/08 using sonication method as per statement of work SOM1.2.

No problems were encountered during extraction.

All samples were analyzed on a P-6890 GC using two columns manufactured by Restek

RTX – CLP2: 30m\*0.53mmID\*0.41um film thickness. (Primary Column)

RTX – CLP: 30m\*0.53mmID\*0.50um film thickness. (Confirmation Column)

A 1uL injection was used.

**The formula used to calculate the Sample concentration:**

**SOIL SAMPLE:**

$$\text{Concentration of Target compound in soil/sediment} = \frac{(Ax)(Vt)(DF)}{(CF)(Vt)(Ws)(D)}$$

Ax = Response of the compound to be measured.

CF = Mean calibration factor from the initial calibration (area/ng)

Vt = 10,000 uL.

Vi = Volume of extract injected.

Ws = Weight of sample extracted.

D =  $\frac{100 - \% \text{moisture}}{100}$

DF = Dilution Factor.

**KAP TECHNOLOGIES, INC.**

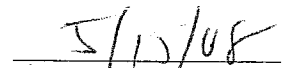
**9391 Grogans Mill Rd, Suite A2 • The Woodlands, TX 77380 • Phone (281) 367-0065**

<b>Contract No. EPW05032</b>	<b>Case No. 37407</b>	<b>SDG No. E0047</b>
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**SDG NARRATIVE**

*I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy sample data package and in the electronic data deliverable has been authorized by the laboratory manager or the manager's designee, as verified by the following signature:*

  
\_\_\_\_\_  
Signature/Title

  
\_\_\_\_\_  
Date of Signature





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**Subject:** Region 05 | Case 37407 | Lab KAP | Issue Discrepancies with tags, jars, and/or TR/COC | FINAL  
**Date:** Wed, 23 Apr 2008 17:45:26 -0400  
**From:** "jewell, jesse" <jjewell3@fedcsc.com>  
**To:** ralsakani@sbcglobal.net  
**CC:** "Wagner, Mark" <Mark.Wagner@illinois.gov>, "Carlene Thomas" <thomas.carlene@epa.gov>, "Howard Pham" <pham.howard@epa.gov>, "Warren Layne" <layne.warren@epa.gov>

Rao,

\*\*\*Summary Start\*\*\*

Issue: The Case number is missing from the TR/COC for the 7 soil samples received on 4/22. The analysis is for VOA/SVOA/ARO/PEST.

Resolution: Per Region 5, the correct Case number is 37407. Please note the issue in the SDG Narrative and proceed with the analysis.

\*\*\*Summary End\*\*\*

Please let me know if you have any questions or problems.

Thanks,

Jesse

Jesse Jewell  
Environmental Coordinator  
Regions 4 & 5  
JJewell3@fedcsc.com  
Computer Sciences Corporation  
1-703-818-4184

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---

-----Original Message-----

From: Pham.Howard@epamail.epa.gov [mailto:Pham.Howard@epamail.epa.gov]  
Sent: Wednesday, April 23, 2008 4:35 PM  
To: jewell, jesse  
Subject: Re: Region 05 | Case 37407 | Lab KAP | Issue Discrepancies with tags, jars, and/or TR/COC |

Hi Jesse,

It is OK, please make a note in the case narrative and request the lab proceed the analyses. Thanks,

Howard Pham, Chemist/Contract Laboratory Program Project Officer  
U.S. EPA, Region 5 (SMF-4J)  
77 West Jackson Blvd.  
Chicago, IL 60604  
(312) 353-2310  
(312) 353-9281 (fax)  
pham.howard@epa.gov

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NOTICE OF CONFIDENTIALITY

02432

2C - FORM II VOA-3  
SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKAB	97	93	75	92	93	100	93
02	E0047	92	129	73	70	85	98	93
03	E0049	93	111	74	73	98	94	113
04	E0050	87	103	69	70	88	86	99
05	E0051	97	111	76	74	98	100	103
06	E0058	94	112	77	69	97	97	99
07	E0048	100	130	81	88	113	108	150 *
08	E0057	100	122	73	77	99	102	129 *
09	E0053	86	106	67	59	85	80	110
10	E0052	106	133 *	83	67	102	96	144 *
11	VBLKAD	104	106	82	66	98	93	102
12	E0062	108	120	86	72	102	97	126 *
13	E0064	108	111	79	69	95	92	107
14	E0065	100	106	77	61	95	86	128 *
15	E0047RE	87	87	67	48	80	73 *	88
16	E0048RE	170 *	187 *	113	118	155 *	126 *	268 *
17	E0052RE	137 *	144 *	97	97	129 *	119	183 *
18	E0054	77	82	61	55	78	69 *	101
19	E0055	88	95	70	65	89	84	117
20	E0056	92	103	73	77	96	95	129 *
21	E0057MS	93	108	83	77	93	88	150 *
22	E0057MSD	96	112	84	76	95	93	156 *
23	VBLKAF	97	90	76	74	93	90	100
24	E0072	104	123	80	86	104	97	163 *
25	E0073	87	91	68	64	86	81	100
26	E0060	92	92	71	52	85	76 *	107
27	E0067	94	97	74	64	92	87	110
28	E0061	95	103	70	78	94	94	125 *
29	VBLKAH	97	85	76	69	93	87	102
30	E0072RE	101	106	76	67	97	87	151 *

QC LIMITS

VDMC1 (VCL) = Vinyl Chloride-d3  
VDMC2 (CLA) = Chloroethene-d5  
VDMC3 (DCE) = 1,1-Dichloroethene-d2  
VDMC4 (BUT) = 2-Butanone-d5  
VDMC5 (CLF) = Chloroform-d  
VDMC6 (DCA) = 1,2-Dichloroethane-d4  
VDMC7 (BEN) = Benzene-d6

(68-122)  
(61-130)  
(45-132)  
(20-182)  
(72-123)  
(79-122)  
(80-121)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

2D - FORM II VOA-4  
SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Level: ( LOW/MED) LOW

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (DXE) #	VDMC13 (TCA) #	VDMC14 (DCZ) #	TOT OUT
01	VBLKAB	95	94	92	90	95	89	97	0
02	E0047	93	93	81	52	78	64	98	0
03	E0049	115	105	85	83	71	84	100	0
04	E0050	101	95	83	78	56	75	95	0
05	E0051	104	100	98	79	70	84	93	0
06	E0058	99	98	90	71	74	81	97	0
07	E0048	160 *	132 *	96	115	99	113	126	3
08	E0057	135 *	107	102	98	84	88	93	2
09	E0053	111	100	74	74	69	78	84	0
10	E0052	151 *	121	91	86	76	94	93	3
11	VBLKAD	99	104	89	67	72	76	100	0
12	E0062	125 *	121	102	89	81	85	112	2
13	E0064	106	106	92	79	86	80	107	0
14	E0065	128 *	115	89	78	60	77	95	2
15	E0047RE	87	88	73	49	89	60	83	1
16	E0048RE	329 *	175 *	98	172	198 *	184 *	102	9
17	E0052RE	219 *	143 *	126	135	169 *	142	107	7
18	E0054	101	93	67 *	69	80	65	83	2
19	E0055	121	106	83	80	98	81	95	0
20	E0056	135 *	113	98	101	116	100	107	2
21	E0057MS	161 *	119	83	114	128	92	98	2
22	E0057MSD	164 *	122 *	91	114	134	92	98	3
23	VBLKAF	100	100	89	78	112	81	98	0
24	E0072	168 *	129 *	91	111	122	97	98	3
25	E0073	103	95	79	71	102	81	95	0
26	E0060	105	100	79	63	79	63	82	1
27	E0067	111	103	91	76	93	78	91	0
28	E0061	129 *	102	106	113	121	122	96	2
29	VBLKAH	101	102	87	74	78	78	97	0
30	E0072RE	153 *	127 *	91	87	124	89	110	3

QC LIMITS

VDMC8 (DPA) = 1,2-Dichloropropane-d6  
VDMC9 (TOL) = Toluene-d8  
VDMC10 (TDP) = trans-1,3-Dichloropropene-d4  
VDMC11 (HEX) = 2-Hexanone-d5  
VDMC12 (DXE) = 1,4-Dioxane-d8  
VDMC13 (TCA) = 1,1,2,2-Tetrachloroethane-d  
VDMC14 (DCZ) = 1,2-Dichlorobenzene-d4

(74-124)  
(78-121)  
(72-130)  
(17-184)  
(50-150)  
(56-161)  
(70-131)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

2C - FORM II VOA-3  
SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VHBLK01	89	90	75	75	96	95	96
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

QC LIMITS

VDMC1 (VCL) = Vinyl Chloride-d3  
VDMC2 (CLA) = Chloroethene-d5  
VDMC3 (DCE) = 1,1-Dichloroethene-d2  
VDMC4 (BUT) = 2-Butanone-d5  
VDMC5 (CLF) = Chloroform-d  
VDMC6 (DCA) = 1,2-Dichloroethane-d4  
VDMC7 (BEN) = Benzene-d6

(68-122)  
(61-130)  
(45-132)  
(20-182)  
(72-123)  
(79-122)  
(80-121)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits



2D - FORM II VOA-4  
SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Level: ( LOW/MED) LOW

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (DXE) #	VDMC13 (TCA) #	VDMC14 (DCZ) #	TOT OUT
01	VHBLK01	95	97	89	77	89	86	98	0
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
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17									
18									
19									
20									
21									
22									
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25									
26									
27									
28									
29									
30									

QC LIMITS

VDMC8 (DPA) = 1,2-Dichloropropane-d6  
VDMC9 (TOL) = Toluene-d8  
VDMC10 (TDP) = trans-1,3-Dichloropropene-d4  
VDMC11 (HEX) = 2-Hexanone-d5  
VDMC12 (DXE) = 1,4-Dioxane-d8  
VDMC13 (TCA) = 1,1,2,2-Tetrachloroethane-d  
VDMC14 (DCZ) = 1,2-Dichlorobenzene-d4

(74-124)  
(78-121)  
(72-130)  
(17-184)  
(50-150)  
(56-161)  
(70-131)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

3B - FORM III VOA-2  
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Matrix Spike - EPA Sample No.: E0057

Level: (LOW/MED)

LOW

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENTRATION (ug/kg)	MS CONCENTRATION (ug/kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	61	0	43	70	59-172
Trichloroethene	61	0	67	110	62-137
Benzene	61	0	88	144 *	66-142
Toluene	61	0	80	131	59-139
Chlorobenzene	61	0	69	113	60-133

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENTRATION (ug/kg)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
1,1-Dichloroethene	48	33	69	1	0-22	59-172
Trichloroethene	48	51	106	4	0-24	62-137
Benzene	48	68	142	1	0-21	66-142
Toluene	48	62	129	2	0-21	59-139
Chlorobenzene	48	53	110	3	0-21	60-133

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 1 out of 10 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

00016

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKAB

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Lab File ID: A13683

Lab Sample ID: VBLKAB

Instrument ID: A-5973

Matrix: (SOIL/SED/WATER) SOIL

Date Analyzed: 05/01/2008

Level: (TRACE or LOW/MED LOW

Time Analyzed: 1727

GC Column: RTX-VMS ID: 0.25 (mm)

Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0047	S-0873.01	A13684	1800
02	E0049	S-0873.03	A13685	1834
03	E0050	S-0873.04	A13686	1907
04	E0051	S-0873.05	A13687	1943
05	E0058	S-0874.05	A13688	2016
06	E0048	S-0873.02	A13691	2156
07	E0057	S-0874.04	A13692	2346
08	E0053	S-0873.07	A13694	0053
09	E0052	S-0873.06	A13695	0125
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COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKAD

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Lab File ID: A13700

Lab Sample ID: VBLKAD

Instrument ID: A-5973

Matrix: (SOIL/SED/WATER) SOIL

Date Analyzed: 05/02/2008

Level: (TRACE or LOW/MED LOW

Time Analyzed: 0930

GC Column: RTX-VMS ID: 0.25 (mm)

Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0062	S-0874.08	A13702	1040
02	E0064	S-0874.09	A13703	1116
03	E0065	S-0874.10	A13704	1148
04	E0047RE	S-0873.01RE	A13706	1228
05	E0048RE	S-0873.02RE	A13707	1301
06	E0052RE	S-0873.06RE	A13708	1333
07	E0054	S-0874.01	A13709	1415
08	E0055	S-0874.02	A13710	1447
09	E0056	S-0874.03	A13711	1519
10	E0057MS	S-0874.04MS	A13713	1624
11	E0057MSD	S-0874.04MSD	A13714	1656
12				
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COMMENTS:



4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKAF

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Lab File ID: A13724

Lab Sample ID: VBLKAF

Instrument ID: A-5973

Matrix: (SOIL/SED/WATER) SOIL

Date Analyzed: 05/03/2008

Level: (TRACE or LOW/MED LOW)

Time Analyzed: 1033

GC Column: RTX-VMS

ID: 0.25

(mm)

Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0072	S-0878.01	A13730	1344
02	E0073	S-0878.02	A13731	1416
03	E0060	S-0874.06	A13733	1520
04	E0067	S-0874.11	A13734	1552
05	E0061	S-0874.07	A13735	1623
06				
07				
08				
09				
10				
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COMMENTS:

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKAH

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Lab File ID: A13743

Lab Sample ID: VBLKAH

Instrument ID: A-5973

Matrix: (SOIL/SED/WATER) SOIL

Date Analyzed: 05/04/2008

Level: (TRACE or LOW/MED LOW)

Time Analyzed: 1020

GC Column: RTX-VMS ID: 0.25 (mm) Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0072RE	S-0878.01RE	A13747	1232
02	VHBLK01	S-0873.08	A13757	1752
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
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28				
29				
30				

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

## 8A - FORM VIII VOA

## VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column: RTX-VMS ID: 0.25 (mm) Init. Calib. Date(s): 05/01/2008 05/01/2008

EPA Sample No. (VSTD#####): VSTD050AB

Date Analyzed: 05/01/2008

Lab File ID (Standard): A13681

Time Analyzed: 1613

Instrument ID: A-5973

Heated Purge: (Y/N) Y

	IS1 (CBZ)	AREA #	RT #	IS2 (DFB)	AREA #	RT #	IS3 (DCB)	AREA #	RT #
12 HOUR STD	6335152	13.14		7233974	8.56		3364771	17.22	
UPPER LIMIT	12670304	13.64		14467948	9.06		6729542	17.72	
LOWER LIMIT	3167576	12.64		3616987	8.06		1682385	16.72	
EPA SAMPLE No.									
01 VSTD050AB	6335152	13.14		7233974	8.56		3364771	17.22	
02 VBLKAB	8271528	13.14		9112368	8.56		4355201	17.22	
03 E0047	3088477*	13.14		3456124*	8.56		1399458*	17.22	
04 E0049	7330058	13.14		10059465	8.56		2161301	17.22	
05 E0050	7169024	13.14		9448727	8.56		2318655	17.22	
06 E0051	8181688	13.14		10106882	8.56		3070402	17.22	
07 E0058	9683489	13.14		11386497	8.56		4260407	17.22	
08 E0048	5592145	13.14		9052714	8.56		1139683*	17.22	
09 E0057	5486763	13.14		8598892	8.56		1439954*	17.22	
10 E0053	6618399	13.14		10280093	8.56		1767327	17.21	
11 E0052	4790730	13.14		8665418	8.56		818153*	17.22	
12 VSTD050AC	5296964	13.14		6323922	8.56		2572610	17.22	
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8A - FORM VIII VOA

## VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column: RTX-VMS ID: 0.25 (mm) Init. Calib. Date(s): 05/01/2008 05/01/2008

EPA Sample No. (VSTD#####): VSTD050AD

Date Analyzed: 05/02/2008

Lab File ID (Standard): A13699

Time Analyzed: 0853

Instrument ID: A-5973

Heated Purge: (Y/N) Y

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	5823093	13.13	6909791	8.55	2806399	17.21
UPPER LIMIT	11646186	13.63	13819582	9.05	5612798	17.71
LOWER LIMIT	2911546	12.63	3454895	8.05	1403199	16.71
EPA SAMPLE No.						
01 VSTD050AD	5823093	13.13	6909791	8.55	2806399	17.21
02 VBLKAD	7043241	13.13	8325809	8.55	3330012	17.21
03 E0062	6114956	13.13	8485844	8.55	2080772	17.21
04 E0064	7732455	13.13	9299472	8.56	3304288	17.21
05 E0065	8299762	13.13	12299036	8.56	2283659	17.21
06 E0047RE	13088187*	13.13	15216489*	8.56	6281222*	17.21
07 E0048RE	2593893*	13.13	6301149	8.56	437584*	17.21
08 E0052RE	4430838	13.14	8465655	8.56	778130*	17.21
09 E0054	9298477	13.14	13352204	8.56	2529550	17.21
10 E0055	8883709	13.14	12978945	8.56	2287916	17.21
11 E0056	7260132	13.14	11006135	8.56	1802837	17.22
12 E0057MS	5132938	13.14	9622664	8.56	1003133*	17.22
13 E0057MSD	4944538	13.14	9401564	8.56	938828*	17.22
14 VSTD050AE	6940123	13.14	8016510	8.56	3553593	17.22
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.



## 8A - FORM VIII VOA

## VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column: RTX-VMSID: 0.25 (mm) Init. Calib. Date(s): 05/01/2008 05/01/2008

EPA Sample No. (VSTD#####): VSTD050AF

Date Analyzed: 05/03/2008

Lab File ID (Standard): A13723

Time Analyzed: 1001

Instrument ID: A-5973

Heated Purge: (Y/N) Y

		IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	7674560	13.11	9114510	8.53	3815445	17.19
	UPPER LIMIT	15349120	13.61	18229020	9.03	7630890	17.69
	LOWER LIMIT	3837280	12.61	4557255	8.03	1907722	16.69
	EPA SAMPLE No.						
01	VSTD050AF	7674560	13.11	9114510	8.53	3815445	17.19
02	VLKAF	9121349	13.11	10557883	8.53	4368532	17.19
03	E0072	4949580	13.11	8917688	8.54	1105196*	17.19
04	E0073	10979386	13.11	13841590	8.54	4407041	17.19
05	E0060	10271217	13.11	13961049	8.54	3408452	17.19
06	E0067	9130932	13.11	12086844	8.54	3071368	17.19
07	E0061	6857011	13.11	10502876	8.54	1946292	17.19
08	VSTD050AG	8290143	13.11	9434408	8.53	4294684	17.19
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8A - FORM VIII VOA

## VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column: RTX-VMS ID: 0.25 (mm) Init. Calib. Date(s): 05/01/2008 05/01/2008

EPA Sample No. (VSTD#####): VSTD050AH

Date Analyzed: 05/04/2008

Lab File ID (Standard): A13742

Time Analyzed: 0948

Instrument ID: A-5973

Heated Purge: (Y/N) Y

		IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	8014290	13.10	9541862	8.52	3846057	17.18
	UPPER LIMIT	16028580	13.60	19083724	9.02	7692114	17.68
	LOWER LIMIT	4007145	12.60	4770931	8.02	1923028	16.68
	EPA SAMPLE No.						
01	VSTD050AH	8014290	13.10	9541862	8.52	3846057	17.18
02	VBLKAH	9800454	13.10	11336417	8.52	4770726	17.18
03	E0072RE	6267419	13.10	11160239	8.53	1265305*	17.18
04	VHBLK01	8455225	13.11	9492710	8.54	4180120	17.19
05	VSTD050AI	6308714	13.11	7485451	8.53	3135272	17.19
06							
07							
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21							
22							

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

2J - FORM II SV-3  
SOIL SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	SDMC1 (PHL) #	SDMC2 (BCE) #	SDMC3 (2CP) #	SDMC4 (4MP) #	SDMC5 (NBZ) #	SDMC6 (2NP) #	SDMC7 (DCP) #	SDMC8 (4CA) #
01	SBLK72	75	68	75	68	71	73	70	68
02	SBLK69	42	65	71	66	66	67	69	69
03	E0072	79	73	83	69	79	85	82	72
04	E0049	45	72	85	84	75	79	83	45
05	E0052	42	65	77	76	67	67	75	53
06	E0048	35	53	65	66	55	57	61	50
07	E0073	79	73	82	65	78	83	80	64
08	E0051	39	61	71	71	65	65	72	54
09	E0055	113 *	65	75	75	63	69	79	64
10	E0056	162 *	78	93	98	76	84	93	78
11	E0057	146 *	72	88	90	79	81	88	19
12	E0057MS	135 *	74	84	99	80	85	96	10
13	E0050	71	63	71	66	69	70	69	55
14	E0057MSD	166 *	77	100	120 *	81	87	100	9
15	E0053	69	61	68	66	65	69	69	58
16	E0047	57	50	55	54	55	58	58	46
17	E0058	127 *	73	85	69	75	81	82	55
18	E0060	76	69	82	73	70	74	82	57
19	E0062	82	52	61	69	51	56	64	52
20	E0064	104 *	63	74	64	66	73	77	57
21	E0065	97	56	70	72	59	65	74	64
22	E0067	135 *	68	84	90	72	79	84	60
23	E0061	98	53	66	71	56	61	68	57
24	E0054	122 *	64	75	80	65	73	75	71
25									
26									
27									
28									
29									
30									

QC LIMITS

SDMC1 (PHL) = Phenol-d5	(17-103)
SDMC2 (BCE) = Bis-(2-chloroethyl)ether-d8	(12-98)
SDMC3 (2CP) = 2-Chlorophenol-d4	(13-101)
SDMC4 (4MP) = 4-Methylphenol-d8	(8-100)
SDMC5 (NBZ) = Nitrobenzene-d5	(16-103)
SDMC6 (2NP) = 2-Nitrophenol-d4	(16-104)
SDMC7 (DCP) = 2,4-Dichlorophenol-d3	(23-104)
SDMC8 (4CA) = 4-Chloroaniline-d4	(1-145)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D DMC diluted out

2K - FORM II SV-4  
SOIL SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	SDMC9 (DMP) #	SDMC10 (ACY) #	SDMC11 (4NP) #	SDMC12 (FLR) #	SDMC13 (NMP) #	SDMC14 (ANC) #	SDMC15 (PYR) #	SDMC16 (BAP) #	TOT OUT
01	SBLK72	72	71	68	72	55	71	68	64	0
02	SBLK69	70	67	66	73	62	67	63	66	0
03	E0072	78	78	95	79	68	76	77	73	0
04	E0049	78	79	79	86	69	80	77	77	0
05	E0052	70	71	76	78	26	70	76	69	0
06	E0048	59	60	64	67	18	62	66	59	0
07	E0073	79	78	88	77	62	75	79	73	0
08	E0051	69	69	78	78	15	74	77	71	0
09	E0055	69	69	87	83	59	72	69	71	1
10	E0056	81	83	88	94	79	83	87	81	1
11	E0057	78	81	82	93	53	80	73	79	1
12	E0057MS	76	82	110	105	52	83	70	80	1
13	E0050	71	71	92	72	56	72	73	69	0
14	E0057MSD	83	87	102	105	57	88	69	85	2
15	E0053	69	69	91	69	55	70	75	69	0
16	E0047	61	60	80	62	45	62	69	63	0
17	E0058	78	81	79	91	54	80	75	77	1
18	E0060	72	75	88	92	46	75	73	74	0
19	E0062	57	61	64	83	19	61	48 *	61	1
20	E0064	73	76	73	85	35	73	72	71	1
21	E0065	64	66	77	80	32	67	62	67	0
22	E0067	76	79	78	92	43	76	77	76	1
23	E0061	60	68	97	82	23	52	66	65	0
24	E0054	69	71	65	82	42	69	71	70	1
25										
26										
27										
28										
29										
30										

SDMC9 (DMP) = Dimethylphthalate-d6

SDMC10 (ACY) = Acenaphthylene-d8

SDMC11 (4NP) = 4-Nitrophenol-d4

SDMC12 (FLR) = Fluorene-d10

SDMC13 (NMP) = 4,6-Dinitro-2-methylphenol-d2

SDMC14 (ANC) = Anthracene-d10

SDMC15 (PYR) = Pyrene-d10

SDMC16 (BAP) = Benzo(a)pyrene-d12

QC LIMITS

(43-111)

(20-97)

(16-166)

(40-108)

(1-121)

(22-98)

(51-120)

(43-111)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D DMC diluted out



3D - FORM III SV-2  
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Matrix Spike - EPA Sample No.: E0057

Level: (LOW/MED) LOW

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENTRATION (ug/kg)	MS CONCENTRATION (ug/kg)	MS % REC #	QC LIMITS REC.
Phenol	1545	0	1400	91 *	26-90
2-Chlorophenol	1545	0	1200	78	25-102
N-Nitroso-di-n-propylamine	1545	0	1300	84	41-126
4-Chloro-3-methylphenol	1545	0	1600	104 *	26-103
Acenaphthene	1545	0	1200	78	31-137
4-Nitrophenol	1545	0	1600	104	11-114
2,4-Dinitrotoluene	1545	0	1400	91 *	28-89
Pentachlorophenol	1545	0	1200	78	17-109
Pyrene	1545	220	1200	63	35-142

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENTRATION (ug/kg)	MSD % REC #	%	QC LIMITS	
					RPD #	REC.
Phenol	1540	1600	104 *	13	0-35	26-90
2-Chlorophenol	1540	1400	91	15	0-50	25-102
N-Nitroso-di-n-propylamine	1540	1500	97	14	0-38	41-126
4-Chloro-3-methylphenol	1540	1700	110 *	6	0-33	26-103
Acenaphthene	1540	1200	78	0	0-19	31-137
4-Nitrophenol	1540	1400	91	13	0-50	11-114
2,4-Dinitrotoluene	1540	1300	84	8	0-47	28-89
Pentachlorophenol	1540	1200	78	0	0-47	17-109
Pyrene	1540	1200	64	2	0-36	35-142

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 9 outside limits

Spike Recovery: 5 out of 18 outside limits

COMMENTS:

SOM01.1 (5/2005)

00603

4C - FORM IV SV  
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK69

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Lab File ID: F25690

Lab Sample ID: SBLK69

Instrument ID: F-5973

Date Extracted 04/28/2008

Matrix: (SOIL/SED/WATER) SOIL

Date Analyzed: 05/13/2008

Level: (LOW/MED) LOW

Time Analyzed: 1758

Extraction: (Type) SONC

GPC Cleanup: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	E0049	S-0873.03	F25691	05/13/2008
02	E0052	S-0873.06	F25693	05/13/2008
03	E0048	S-0873.02	F25694	05/13/2008
04	E0051	S-0873.05	F25696	05/13/2008
05	E0055	S-0874.02	F25702	05/14/2008
06	E0056	S-0874.03	F25703	05/14/2008
07	E0057	S-0874.04	F25704	05/14/2008
08	E0057MS	S-0874.04MS	F25705	05/14/2008
09	E0050	S-0873.04	G0138	05/14/2008
10	E0057MSD	S-0874.04MSD	F25706	05/14/2008
11	E0053	S-0873.07	G0139	05/14/2008
12	E0047	S-0873.01	G0140	05/14/2008
13	E0058	S-0874.05	F25718	05/14/2008
14	E0060	S-0874.06	F25719	05/14/2008
15	E0062	S-0874.08	F25720	05/14/2008
16	E0064	S-0874.09	F25721	05/14/2008
17	E0065	S-0874.10	F25722	05/14/2008
18	E0067	S-0874.11	F25723	05/14/2008
19	E0061	S-0874.07	F25724	05/14/2008
20	E0054	S-0874.01	F25725	05/14/2008
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COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

4C - FORM IV SV  
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK72

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Lab File ID: G0119

Lab Sample ID: SBLK72

Instrument ID: G-5973

Date Extracted 05/01/2008

Matrix: (SOIL/SED/WATER) SOIL

Date Analyzed: 05/13/2008

Level: (LOW/MED) LOW

Time Analyzed: 1655

Extraction: (Type) SONC

GPC Cleanup: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	E0072	S-0878.01	G0122	05/13/2008
02	E0073	S-0878.02	G0127	05/13/2008
03				
04				
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COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

## 8C - FORM VIII SV-1

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column: RTX-5MS ID: 0.25 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008

EPA Sample No. (SSTD020##): SSTD02008

Date Analyzed: 05/13/2008

Lab File ID (Standard): F25687

Time Analyzed: 1622

Instrument ID: F-5973

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1379515	5.97	5373477	8.75	3078333	12.58
UPPER LIMIT	2759030	6.47	10746954	9.25	6156666	13.08
LOWER LIMIT	689757	5.47	2686738	8.25	1539166	12.08
EPA SAMPLE NO.						
01 SBLK69	1348739	5.97	5608094	8.74	3601136	12.58
02 E0049	1652875	5.97	7303537	8.74	4661960	12.58
03 E0052	1482206	5.97	6885492	8.74	4561665	12.58
04 E0048	1353846	5.97	6559911	8.74	4409592	12.58
05 E0051	1196550	5.97	5327388	8.74	3676011	12.58
06 SSTD02009	1875905	5.96	8980313	8.74	6265543*	12.58
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22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (DCB) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.



## 8D - FORM VIII SV-2

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

EPA Sample No. (SSTD020##): SSTD02008

Date Analyzed: 05/13/2008

Lab File ID (Standard): F25687

Time Analyzed: 1622

Instrument ID: F-5973

GC Column: RTX-5MS

ID: 0.25

(mm)

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	5494436	14.59	6144498	17.44	6459144	19.41
UPPER LIMIT	10988872	15.09	12288996	17.94	12918288	19.91
LOWER LIMIT	2747218	14.09	3072249	16.94	3229572	18.91
EPA SAMPLE NO.						
01 SBLK69	6286861	14.58	7602199	17.44	8043136	19.41
02 E0049	8037399	14.59	9277221	17.44	10117409	19.42
03 E0052	8200049	14.59	8329972	17.44	8878292	19.42
04 E0048	7886468	14.58	7891506	17.44	8314673	19.42
05 E0051	6641957	14.59	7157571	17.44	7658597	19.42
06 SSTD02009	10694719	14.58	7148186	17.43	6498716	19.39
07						
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17						
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19						
20						
21						
22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8C - FORM VIII SV-1

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column: RTX-5MS ID: 0.25 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008

EPA Sample No. (SSTD020##): SSTD02010

Date Analyzed: 05/14/2008

Lab File ID (Standard): F25701

Time Analyzed: 0034

Instrument ID: F-5973

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1325595	5.96	6617798	8.74	4632950	12.58
UPPER LIMIT	2651190	6.46	13235596	9.24	9265900	13.08
LOWER LIMIT	662797	5.46	3308899	8.24	2316475	12.08
EPA SAMPLE NO.						
01 E0055	820680	5.97	3938601	8.74	3101287	12.57
02 E0056	1880341	5.96	9578308	8.74	7033537	12.58
03 E0057	1731415	5.97	8749120	8.74	6457408	12.58
04 E0057MS	945084	5.97	4532947	8.75	3976720	12.58
05 E0057MSD	1130286	5.97	6231555	8.75	5205847	12.58
06 SSTD02011	651998*	5.97	3102358*	8.75	2458814	12.58
07						
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20						
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22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (DCB) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8D - FORM VIII SV-2

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

EPA Sample No. (SSTD020##): SSTD02010 Date Analyzed: 05/14/2008

Lab File ID (Standard): F25701 Time Analyzed: 0034

Instrument ID: F-5973

GC Column: RTX-5MS ID: 0.25 (mm)

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	8090727	14.58	7324172	17.43	7090265	19.39
UPPER LIMIT	16181454	15.08	14648344	17.93	14180530	19.89
LOWER LIMIT	4045363	14.08	3662086	16.93	3545132	18.89
EPA SAMPLE NO.						
01 E0055	6514568	14.58	8422275	17.43	9409982	19.40
02 E0056	13022781	14.58	14054779	17.44	13887984	19.41
03 E0057	12755104	14.59	16192337*	17.45	15994874*	19.44
04 E0057MS	9532318	14.59	14993980*	17.45	16906425*	19.45
05 E0057MSD	11000777	14.59	18620538*	17.46	20797812*	19.46
06 SSTD02011	5618081	14.59	8568087	17.44	10850997	19.42
07						
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19						
20						
21						
22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8C - FORM VIII SV-1

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column: RTX-5MS ID: 0.25 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008

EPA Sample No. (SSTD020##): SSTD02012

Date Analyzed: 05/14/2008

Lab File ID (Standard): F25717

Time Analyzed: 0900

Instrument ID: F-5973

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1913957	5.97	9401426	8.75	7112059	12.59
UPPER LIMIT	3827914	6.47	18802852	9.25	14224118	13.09
LOWER LIMIT	956978	5.47	4700713	8.25	3556029	12.09
EPA SAMPLE NO.						
01 E0058	2458427	5.97	11633272	8.75	7948055	12.59
02 E0060	1225373	5.96	6306148	8.74	5111320	12.58
03 E0062	1076015	5.97	6372964	8.75	5099002	12.59
04 E0064	1965050	5.98	9752182	8.75	6453543	12.59
05 E0065	1251702	5.98	6604200	8.75	5668605	12.59
06 E0067	2103558	5.97	10864987	8.75	8282752	12.59
07 E0061	2170761	5.98	11085048	8.76	9980627	12.62
08 E0054	2295056	5.98	11222182	8.76	8201575	12.59
09 SSTD02013	1476850	5.98	7654416	8.76	5911240	12.59
10						
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22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (DCB) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.



## 8D - FORM VIII SV-2

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

EPA Sample No. (SSTD020##): SSTD02012

Date Analyzed: 05/14/2008

Lab File ID (Standard): F25717

Time Analyzed: 0900

Instrument ID: F-5973

GC Column: RTX-5MS

ID: 0.25

(mm)

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	14383646	14.59	14493380	17.45	15889107	19.42
UPPER LIMIT	28767292	15.09	28986760	17.95	31778214	19.92
LOWER LIMIT	7191823	14.09	7246690	16.95	7944553	18.92
EPA SAMPLE NO.						
01 E0058	14762138	14.59	18221944	17.45	20951997	19.43
02 E0060	10835720	14.59	13104193	17.45	15907573	19.43
03 E0062	12726840	14.60	23943826	17.48	25796778	19.50
04 E0064	13048860	14.60	15028248	17.45	16633761	19.44
05 E0065	11696685	14.60	15504218	17.45	18112488	19.44
06 E0067	15929655	14.60	17387645	17.45	19074322	19.44
07 E0061	26779135	14.62	20510242	17.46	23097318	19.45
08 E0054	15997987	14.60	16658230	17.45	18405833	19.44
09 SSTD02013	12526769	14.60	13198399	17.45	14086660	19.43
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IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8C - FORM VIII SV-1

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column: RTX-5MS ID: 0.25 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008

EPA Sample No. (SSTD020##): SSTD02051

Date Analyzed: 05/13/2008

Lab File ID (Standard): G0117

Time Analyzed: 1540

Instrument ID: 7-5973

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1998861	5.63	8547856	8.38	5026600	12.29
UPPER LIMIT	3997722	6.13	17095712	8.88	10053200	12.79
LOWER LIMIT	999430	5.13	4273928	7.88	2513300	11.79
EPA SAMPLE NO.						
01 SBLK72	1928486	5.63	8424999	8.38	5124083	12.29
02 E0072	1845722	5.63	8234920	8.38	5307943	12.29
03 E0073	2218850	5.63	9644880	8.38	5955328	12.29
04 SSTD02052	1929507	5.63	8276722	8.38	4912512	12.29
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IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (DCB) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8D - FORM VIII SV-2

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

EPA Sample No. (SSTD020##): SSTD02051

Date Analyzed: 05/13/2008

Lab File ID (Standard): G0117

Time Analyzed: 1540

Instrument ID: <sup>9</sup>~~7~~-5973

GC Column: RTX-5MS

ID: 0.25

(mm)

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	8530852	14.33	7947541	17.16	7475339	18.98
UPPER LIMIT	17061704	14.83	15895082	17.66	14950678	19.48
LOWER LIMIT	4265426	13.83	3973770	16.66	3737669	18.48
EPA SAMPLE NO.						
01 SBLK72	8840992	14.32	9115454	17.16	9271638	18.97
02 E0072	9167910	14.33	8945697	17.16	9436667	19.00
03 E0073	10080957	14.33	9476954	17.16	9506986	18.99
04 SSTD02052	8355173	14.33	7854288	17.16	8059433	18.98
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IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8C - FORM VIII SV-1

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

GC Column: RTX-5MS ID: 0.25 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008

EPA Sample No. (SSTD020##): SSTD02053

Date Analyzed: 05/13/2008

Lab File ID (Standard): G0131

Time Analyzed: 2324

Instrument ID: <sup>9</sup>7-5973

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1736067	5.63	7268313	8.38	4506764	12.29
UPPER LIMIT	3472134	6.13	14536626	8.88	9013528	12.79
LOWER LIMIT	868033	5.13	3634156	7.88	2253382	11.79
EPA SAMPLE NO.						
01 E0050	2093656	5.63	9010404	8.38	5547735	12.29
02 E0053	2105482	5.63	9035680	8.38	5568536	12.29
03 E0047	2009666	5.63	8517714	8.39	5123988	12.29
04 SSTD02054	2105528	5.63	9007968	8.38	5358793	12.29
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IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (DCB) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.



## 8D - FORM VIII SV-2

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407 Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

EPA Sample No. (SSTD020##): SSTD02053

Date Analyzed: 05/13/2008

Lab File ID (Standard): G0131

Time Analyzed: 2324

Instrument ID: <sup>9</sup>5973

GC Column: RTX-5MS

ID: 0.25

(mm)

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	7691264	14.32	7607219	17.16	7826285	18.98
UPPER LIMIT	15382528	14.82	15214438	17.66	15652570	19.48
LOWER LIMIT	3845632	13.82	3803609	16.66	3913142	18.48
EPA SAMPLE NO.						
01 E0050	9474028	14.33	9270962	17.16	9667799	18.98
02 E0053	9458634	14.33	8817525	17.16	8926637	18.98
03 E0047	8885481	14.33	8236453	17.16	7984945	18.98
04 SSTD02054	9018368	14.33	8739601	17.16	8916469	18.98
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20						
21						
22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

2P - Form II PEST-2  
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2) RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK60	44	52	58	64			0
02	PLCS60	63	74	75	90			0
03	E0047	50	59	71	81			0
04	E0049	92	96	121	113			0
05	E0050	86	105	112	134			0
06	E0051	87	104	116	122			0
07	E0052	77	87	106	112			0
08	E0053	92	106	120	131			0
09	E0054	67	79	92	94			0
10	E0055	86	82	107	98			0
11	E0056	108	131	131	159 *			1
12	E0057	68	69	96	93			0
13	E0057MS	73	70	118	102			0
14	E0050MSD	64	68	111	93			0
15	E0058	97	107	124	133			0
16	E0060	87	106	119	132			0
17	E0061	37	43	81	95			0
18	E0062	66	65	90	82			0
19	E0064	126	122	166 *	143			1
20	E0067	80	78	108	93			0
21	E0048	84	101	111	124			0
22	E0065	72	79	99	109			0
23	PBLK64	99	92	120	106			0
24	PLCS64	112	108	133	122			0
25	E0073	149	145	187 *	182 *			2
26	E0072	105	100	129	125			0
27								
28								
29								
30								

TCX = Tetrachloro-m-xylene  
DCB = Decachlorobiphenyl

QC LIMITS

(30-150)

(30-150)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogate diluted out

2N - FORM II PEST-1  
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2) RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PIBLKY1	68	68	85	87			0
02	PIBLKZ1	87	84	108	102			0
03	PIBLK11	76	71	107	105			0
04	PIBLK41	103	107	137	138			0
05	PIBLK51	84	95	114	122			0
06	PIBLK61	84	104	114	118			0
07	PIBLK71	86	115	125	136			0
08	PIBLK81	59	83	82	98			0
09	PIBLK91	77	100	108	117			0
10	PIBLKA1	81	97	120	113			0
11	PIBLKB1	86	87	125	111			0
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29								
30								

TCX = Tetrachloro-m-xylene  
DCB = Decachlorobiphenyl

QC LIMITS  
(30-150)  
(30-150)

# Column to be used to flag recovery values  
\* Values outside of contract required QC limits  
D Surrogate diluted out

3H - FORM III PEST-2  
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Matrix Spike - EPA Sample No.: E0057

Instrument ID: A-6890A

GC Column: RTX-CLP2 ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	19.3	0	19.2	99	46-127
Heptachlor	19.3	0	17.4	90	35-130
Aldrin	19.3	0	18.5	96	34-132
Dieldrin	38.6	0	34.2	89	31-134
Endrin	38.6	0	36.4	94	42-139
4,4'-DDT	38.6	5.36	35.4	78	23-134

COMPOUND	SPIKE ADDED ug/Kg	MSD CONCENTRATION ug/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
gamma-BHC (Lindane)	19.3	18.5	96	3	50	46-127
Heptachlor	19.3	16.7	87	3	31	35-130
Aldrin	19.3	17.7	92	4	43	34-132
Dieldrin	38.6	33.3	86	3	38	31-134
Endrin	38.6	35.5	92	2	45	42-139
4,4'-DDT	38.6	33.8	74	5	50	23-134

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 6 outside limits

Spike Recovery: 0 out of 12 outside limits

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

SOM01.1 (5/2005)

3H - FORM III PEST-2  
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Matrix Spike - EPA Sample No.: E0057

Instrument ID: A-6890B

GC Column: RTX-CLP ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	19.3	0	17.0	88	46-127
Heptachlor	19.3	0	14.7	76	35-130
Aldrin	19.3	0	14.0	73	34-132
Dieldrin	38.6	0	28.4	74	31-134
Endrin	38.6	0	32.2	83	42-139
4,4'-DDT	38.6	3.74	26.6	59	23-134

COMPOUND	SPIKE ADDED ug/Kg	MSD CONCENTRATION ug/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
gamma-BHC (Lindane)	19.3	17.1	89	1	50	46-127
Heptachlor	19.3	15.0	78	3	31	35-130
Aldrin	19.3	14.4	75	3	43	34-132
Dieldrin	38.6	28.7	74	0	38	31-134
Endrin	38.6	33.6	87	5	45	42-139
4,4'-DDT	38.6	26.3	58	2	50	23-134

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 6 outside limits

Spike Recovery: 0 out of 12 outside limits

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

SOM01.1 (5/2005)



3M - FORM III PEST-4  
SOIL PESTICIDE LABORATORY CONTROL  
SAMPLE RECOVERY

EPA SAMPLE NO.

PLCS60

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Lab Sample ID: PLCS60

LCS Lot No.: A031346

Date Extracted 04/28/2008

Date Analyzed (1): 05/12/2008

Instrument ID (1): A-6890A

GC Column (1): RTX-CLP2 ID: 0.53 (mm)

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
gamma-BHC (Lindane)	1.67	0.900	54	50-120
Heptachlor epoxide	1.67	1.26	75	50-150
Dieldrin	3.33	2.28	68	30-130
4,4'-DDE	3.33	2.10	63	50-150
Endrin	3.33	2.27	68	50-120
Endosulfan sulfate	3.33	2.53	76	50-120
gamma-Chlordane	1.67	1.40	84	30-130

Instrument ID (2): A-6890B

GC Column (2): RTX-CLP ID: 0.53 (mm)

Date Analyzed (2): 05/12/2008

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
gamma-BHC (Lindane)	1.67	1.12	67	50-120
Heptachlor epoxide	1.67	1.35	81	50-150
Dieldrin	3.33	2.93	88	30-130
4,4'-DDE	3.33	2.84	85	50-150
Endrin	3.33	3.14	94	50-120
Endosulfan sulfate	3.33	3.33	100	50-120
gamma-Chlordane	1.67	1.51	90	30-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

LCS Recovery: 0 out of 14 outside limits

COMMENTS:

SOM01.1 (5/2005)

3M - FORM III PEST-4  
SOIL PESTICIDE LABORATORY CONTROL  
SAMPLE RECOVERY

EPA SAMPLE NO.  
PLCS64

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
Lab Sample ID: PLCS64 LCS Lot No.: A031346  
Date Extracted 04/30/2008 Date Analyzed (1): 05/13/2008  
Instrument ID (1): A-6890A GC Column (1): RTX-CLP2 ID: 0.53 (mm)

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
gamma-BHC (Lindane)	1.67	1.57	94	50-120
Heptachlor epoxide	1.67	1.65	99	50-150
Dieldrin	3.33	3.45	104	30-130
4,4'-DDE	3.33	3.21	96	50-150
Endrin	3.33	3.64	109	50-120
Endosulfan sulfate	3.33	3.25	98	50-120
gamma-Chlordane	1.67	1.82	109	30-130

Instrument ID (2): A-6890B GC Column (2): RTX-CLP ID: 0.53 (mm)  
Date Analyzed (2): 05/13/2008

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
gamma-BHC (Lindane)	1.67	1.51	90	50-120
Heptachlor epoxide	1.67	1.67	100	50-150
Dieldrin	3.33	3.20	96	30-130
4,4'-DDE	3.33	3.72	112	50-150
Endrin	3.33	3.44	103	50-120
Endosulfan sulfate	3.33	2.87	86	50-120
gamma-Chlordane	1.67	2.04	122	30-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

LCS Recovery: 0 out of 14 outside limits

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

SOM01.1 (5/2005)

01783

4E - FORM IV PEST  
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK60

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: SDG No.: E0047  
Lab Sample ID: PBLK60 Lab File ID: A10359  
Matrix: (SOIL/SED/WATER) SOIL Extraction: (Type) SONC Date Extracted: 04/28/2008  
Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) Y  
Date Analyzed (1): 05/12/2008 Date Analyzed (2): 05/12/2008  
Time Analyzed (1): 1520 Time Analyzed (2): 1602  
Instrument ID (1): A-6890A Instrument ID (2): A-6890B  
GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2): RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED (1)	DATE ANALYZED (2)
01	PLCS60	PLCS60	05/12/2008	05/12/2008
02	E0047	S-0873.01	05/12/2008	05/12/2008
03	E0049	S-0873.03	05/12/2008	05/12/2008
04	E0050	S-0873.04	05/12/2008	05/12/2008
05	E0051	S-0873.05	05/12/2008	05/12/2008
06	E0052	S-0873.06	05/12/2008	05/12/2008
07	E0053	S-0873.07	05/12/2008	05/12/2008
08	E0054	S-0874.01	05/12/2008	05/12/2008
09	E0055	S-0874.02	05/13/2008	05/13/2008
10	E0056	S-0874.03	05/13/2008	05/13/2008
11	E0057	S-0874.04	05/13/2008	05/13/2008
12	E0057MS	S-0874.04MS	05/13/2008	05/13/2008
13	E0050MSD	S-0874.04MSD	05/13/2008	05/13/2008
14	E0058	S-0874.05	05/13/2008	05/13/2008
15	E0060	S-0874.06	05/13/2008	05/13/2008
16	E0061	S-0874.07	05/13/2008	05/13/2008
17	E0062	S-0874.08	05/13/2008	05/13/2008
18	E0064	S-0874.09	05/13/2008	05/13/2008
19	E0067	S-0874.11	05/13/2008	05/13/2008
20	E0048	S-0873.02	05/13/2008	05/13/2008
21	E0065	S-0874.10	05/13/2008	05/13/2008
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COMMENTS: \_\_\_\_\_

4E - FORM IV PEST  
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.  
PBLK64

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
Lab Sample ID: PBLK64 Lab File ID: A10398  
Matrix: (SOIL/SED/WATER) SOIL Extraction: (Type) SONC Date Extracted: 04/30/2008  
Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) Y  
Date Analyzed (1): 05/13/2008 Date Analyzed (2): 05/13/2008  
Time Analyzed (1): 2053 Time Analyzed (2): 2130  
Instrument ID (1): A-6890A Instrument ID (2): A-6890B  
GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2): RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED (1)	DATE ANALYZED (2)
01	PLCS64	PLCS64	05/13/2008	05/13/2008
02	E0073	S-0878.02	05/14/2008	05/14/2008
03	E0072	S-0878.01	05/14/2008	05/14/2008
04				
05				
06				
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COMMENTS: \_\_\_\_\_

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION						
TCX: 10.70			DCB: 25.64			
	EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	RESC11	A10321	5/11/2008	12:23	10.7	25.64
02	PEM11	A10322	5/11/2008	13:00	10.7	25.64
03	TOXAPH111	A10323	5/11/2008	13:37	10.7	25.64
04	TOXAPH211	A10324	5/11/2008	14:14	10.7	25.64
05	TOXAPH311	A10325	5/11/2008	14:51	10.7	25.64
06	TOXAPH411	A10326	5/11/2008	15:27	10.7	25.64
07	TOXAPH511	A10327	5/11/2008	16:04	10.7	25.64
08	INDC111	A10328	5/11/2008	16:41	10.7	25.64
09	INDC211	A10329	5/11/2008	17:18	10.7	25.64
10	INDC311	A10330	5/11/2008	17:55	10.7	25.64
11	INDC411	A10331	5/11/2008	18:32	10.7	25.64
12	INDC511	A10332	5/11/2008	19:09	10.7	25.64
13	PIBLK11	A10333	5/11/2008	19:46	10.7	25.64
14	PEM21	A10334	5/11/2008	20:22	10.7	25.64
15	PIBLK41	A10355	5/12/2008	12:53	10.7	25.65
16	PEM41	A10356	5/12/2008	13:29	10.7	25.65
17	GPCBLK60	A10357	5/12/2008	14:06	0 *	0 *
18	ZZZZZ	A10358	5/12/2008	14:43	10.92 *	0 *
19	PBLK60	A10359	5/12/2008	15:20	10.7	25.65
20	PLCS60	A10360	5/12/2008	16:02	10.71	25.66
21	GPCPEST60	A10361	5/12/2008	16:39	0 *	0 *
22	E0047	A10362	5/12/2008	17:16	10.7	25.65
23	ZZZZZ	A10363	5/12/2008	17:51	10.7	25.64
24	E0049	A10364	5/12/2008	18:27	10.7	25.64
25	E0050	A10365	5/12/2008	19:03	10.7	25.65
26	E0051	A10366	5/12/2008	19:41	10.7	25.65
27	E0052	A10367	5/12/2008	20:17	10.7	25.64
28	E0053	A10368	5/12/2008	20:54	10.7	25.65
29	E0054	A10369	5/12/2008	21:31	10.7	25.64
30	ZZZZZ	A10370	5/12/2008	22:08	10.7	25.65
31	PIBLK51	A10371	5/12/2008	22:45	10.7	25.65
32	INDC331	A10372	5/12/2008	23:22	10.7	25.65

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.



8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: -10.70			DCB: 25.64		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 ZZZZZ	A10373	5/12/2008	23:58	10.7	25.65
02 E0055	A10374	5/13/2008	00:34	10.7	25.64
03 E0056	A10375	5/13/2008	01:10	10.7	25.65
04 E0057	A10376	5/13/2008	01:47	10.7	25.65
05 E0057MS	A10377	5/13/2008	02:24	10.7	25.65
06 E0050MSD	A10378	5/13/2008	03:01	10.7	25.65
07 E0058	A10379	5/13/2008	03:38	10.7	25.65
08 E0060	A10380	5/13/2008	04:14	10.7	25.65
09 E0061	A10381	5/13/2008	04:51	10.71	25.65
10 E0062	A10382	5/13/2008	05:28	10.7	25.65
11 E0064	A10383	5/13/2008	06:05	10.7	25.65
12 ZZZZZ	A10384	5/13/2008	06:42	10.7	25.65
13 E0067	A10385	5/13/2008	07:19	10.71	25.65
14 PIBLK61	A10386	5/13/2008	07:56	10.71	25.65
15 PEM51	A10387	5/13/2008	08:34	10.71	25.65
16 ZZZZZ	A10388	5/13/2008	09:10	10.7	25.65
17 E0048	A10389	5/13/2008	09:47	10.7	25.65
18 E0065	A10390	5/13/2008	10:24	10.7	25.65
19 PIBLK71	A10391	5/13/2008	14:03	10.7	25.65
20 INDC361	A10392	5/13/2008	14:40	10.7	25.65
21 PIBLK81	A10394	5/13/2008	18:26	10.71	25.66
22 PEM61	A10395	5/13/2008	19:03	10.71	25.65
23 GPCBLK64	A10396	5/13/2008	19:39	0 *	0 *
24 GPCPEST64	A10397	5/13/2008	20:16	0 *	0 *
25 PBLK64	A10398	5/13/2008	20:53	10.7	25.65
26 PLCS64	A10399	5/13/2008	21:30	10.7	25.65
27 ZZZZZ	A10400	5/13/2008	22:05	10.7	25.64
28 PIBLK91	A10401	5/13/2008	22:42	10.7	25.65
29 ZZZZZ	A10402	5/13/2008	23:19	10.7	25.65
30 INDC371	A10403	5/13/2008	23:56	10.7	25.65
31 ZZZZZ	A10404	5/14/2008	00:33	10.7	25.65
32 E0073	A10405	5/14/2008	01:10	10.7	25.65

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)

DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.96			DCB: 23.45		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 RESC12	A10321	5/11/2008	13:00	9.96	23.44
02 PEM12	A10322	5/11/2008	13:37	9.96	23.44
03 TOXAPH112	A10323	5/11/2008	14:14	9.96	23.44
04 TOXAPH212	A10324	5/11/2008	14:51	9.96	23.44
05 TOXAPH312	A10325	5/11/2008	15:27	9.96	23.44
06 TOXAPH412	A10326	5/11/2008	16:04	9.96	23.44
07 TOXAPH512	A10327	5/11/2008	16:41	9.96	23.44
08 INDC112	A10328	5/11/2008	17:18	9.96	23.45
09 INDC212	A10329	5/11/2008	17:55	9.96	23.45
10 INDC312	A10330	5/11/2008	18:32	9.96	23.45
11 INDC412	A10331	5/11/2008	19:09	9.96	23.45
12 INDC512	A10332	5/11/2008	19:46	9.96	23.44
13 PIBLK12	A10333	5/11/2008	20:22	9.96	23.44
14 PEM22	A10334	5/11/2008	20:59	9.96	23.45
15 PIBLK42	A10355	5/12/2008	13:29	9.96	23.44
16 PEM42	A10356	5/12/2008	14:06	9.96	23.44
17 GPCBLK60	A10357	5/12/2008	14:43	0 *	0 *
18 ZZZZZ	A10358	5/12/2008	15:20	9.72 *	23.6 *
19 PBLK60	A10359	5/12/2008	16:02	9.96	23.44
20 PLCS60	A10360	5/12/2008	16:39	9.96	23.45
21 GPCPEST60	A10361	5/12/2008	17:16	0 *	0 *
22 E0047	A10362	5/12/2008	17:51	9.96	23.45
23 ZZZZZ	A10363	5/12/2008	18:27	9.96	23.45
24 E0049	A10364	5/12/2008	19:03	9.96	23.45
25 E0050	A10365	5/12/2008	19:41	9.96	23.44
26 E0051	A10366	5/12/2008	20:17	9.96	23.45
27 E0052	A10367	5/12/2008	20:54	9.96	23.45
28 E0053	A10368	5/12/2008	21:31	9.96	23.45
29 E0054	A10369	5/12/2008	22:08	9.96	23.45
30 ZZZZZ	A10370	5/12/2008	22:45	9.96	23.44
31 PIBLK52	A10371	5/12/2008	23:22	9.96	23.44
32 INDC332	A10372	5/12/2008	23:58	9.96	23.44

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)

DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.96			DCB: 23.45		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 ZZZZZ	A10373	5/13/2008	00:34	9.96	23.44
02 E0055	A10374	5/13/2008	01:10	9.96	23.44
03 E0056	A10375	5/13/2008	01:47	9.96	23.45
04 E0057	A10376	5/13/2008	02:24	9.96	23.44
05 E0057MS	A10377	5/13/2008	03:01	9.96	23.45
06 E0050MSD	A10378	5/13/2008	03:38	9.96	23.44
07 E0058	A10379	5/13/2008	04:14	9.96	23.45
08 E0060	A10380	5/13/2008	04:51	9.96	23.45
09 E0061	A10381	5/13/2008	05:28	9.98	23.45
10 E0062	A10382	5/13/2008	06:05	9.97	23.45
11 E0064	A10383	5/13/2008	06:42	9.97	23.45
12 ZZZZZ	A10384	5/13/2008	07:19	9.96	23.45
13 E0067	A10385	5/13/2008	07:56	9.97	23.45
14 PIBLK62	A10386	5/13/2008	08:34	9.96	23.45
15 PEM52	A10387	5/13/2008	09:10	9.97	23.46
16 ZZZZZ	A10388	5/13/2008	09:47	9.96	23.45
17 E0048	A10389	5/13/2008	10:24	9.97	23.46
18 E0065	A10390	5/13/2008	11:01	9.96	23.45
19 PIBLK72	A10391	5/13/2008	14:40	9.96	23.45
20 INDC362	A10392	5/13/2008	15:17	9.96	23.45
21 PIBLK82	A10394	5/13/2008	19:03	9.97	23.45
22 PEM62	A10395	5/13/2008	19:39	9.96	23.45
23 GPCBLK64	A10396	5/13/2008	20:16	0 *	0 *
24 GPCPEST64	A10397	5/13/2008	20:53	0 *	0 *
25 PBLK64	A10398	5/13/2008	21:30	9.97	23.46
26 PLCS64	A10399	5/13/2008	22:05	9.96	23.45
27 ZZZZZ	A10400	5/13/2008	22:42	9.96	23.45
28 PIBLK92	A10401	5/13/2008	23:19	9.96	23.45
29 ZZZZZ	A10402	5/13/2008	23:56	9.96	23.46
30 INDC372	A10403	5/14/2008	00:33	9.96	23.46
31 ZZZZZ	A10404	5/14/2008	01:10	9.97	23.46
32 E0073	A10405	5/14/2008	01:46	9.97	23.45

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)

DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 10.70			DCB: 25.64		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	ZZZZZ	A10406	5/14/2008	01:46	10.7
02	ZZZZZ	A10407	5/14/2008	02:23	10.7
03	ZZZZZ	A10408	5/14/2008	03:00	10.7
04	ZZZZZ	A10409	5/14/2008	03:37	10.7
05	ZZZZZ	A10410	5/14/2008	04:14	10.7
06	ZZZZZ	A10411	5/14/2008	04:50	10.71
07	ZZZZZ	A10412	5/14/2008	05:27	10.71
08	ZZZZZ	A10413	5/14/2008	06:04	10.7
09	ZZZZZ	A10414	5/14/2008	06:41	10.7
10	ZZZZZ	A10415	5/14/2008	07:18	10.7
11	ZZZZZ	A10416	5/14/2008	07:55	10.7
12	PIBLKA1	A10417	5/14/2008	08:32	10.71
13	PEM71	A10418	5/14/2008	09:08	10.7
14	ZZZZZ	A10419	5/14/2008	09:45	10.71
15	E0072	A10420	5/14/2008	10:22	10.7
16	ZZZZZ	A10421	5/14/2008	10:59	10.7
17	ZZZZZ	A10422	5/14/2008	11:36	10.7
18	ZZZZZ	A10423	5/14/2008	12:13	10.7
19	ZZZZZ	A10424	5/14/2008	12:49	10.7
20	ZZZZZ	A10425	5/14/2008	13:26	10.7
21	ZZZZZ	A10426	5/14/2008	14:03	10.7
22	ZZZZZ	A10427	5/14/2008	14:40	10.7
23	ZZZZZ	A10428	5/14/2008	15:17	10.7
24	PIBLKB1	A10429	5/14/2008	15:54	10.7
25	INDC81	A10430	5/14/2008	16:31	10.7
26					
27					
28					
29					
30					
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)  
DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.96		DCB: 23.45			
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	ZZZZZ	A10406	5/14/2008	02:23	9.97
02	ZZZZZ	A10407	5/14/2008	03:00	9.96
03	ZZZZZ	A10408	5/14/2008	03:37	9.96
04	ZZZZZ	A10409	5/14/2008	04:14	9.96
05	ZZZZZ	A10410	5/14/2008	04:50	9.97
06	ZZZZZ	A10411	5/14/2008	05:27	9.96
07	ZZZZZ	A10412	5/14/2008	06:04	9.97
08	ZZZZZ	A10413	5/14/2008	06:41	9.97
09	ZZZZZ	A10414	5/14/2008	07:18	9.96
10	ZZZZZ	A10415	5/14/2008	07:55	9.97
11	ZZZZZ	A10416	5/14/2008	08:32	9.97
12	PIBLKA2	A10417	5/14/2008	09:08	9.96
13	PEM72	A10418	5/14/2008	09:45	9.97
14	ZZZZZ	A10419	5/14/2008	10:22	9.96
15	E0072	A10420	5/14/2008	10:59	9.96
16	ZZZZZ	A10421	5/14/2008	11:36	9.96
17	ZZZZZ	A10422	5/14/2008	12:13	9.96
18	ZZZZZ	A10423	5/14/2008	12:49	9.96
19	ZZZZZ	A10424	5/14/2008	13:26	9.96
20	ZZZZZ	A10425	5/14/2008	14:03	9.96
21	ZZZZZ	A10426	5/14/2008	14:40	9.96
22	ZZZZZ	A10427	5/14/2008	15:17	9.96
23	ZZZZZ	A10428	5/14/2008	15:54	9.96
24	PIBLKB2	A10429	5/14/2008	16:31	9.96
25	INDC82	A10430	5/14/2008	17:08	9.96
26					
27					
28					
29					
30					
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)

DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.



1G - FORM I PEST  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
PLCS60(1)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: PLCS60

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: A10360

% Moisture: 0 Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SONC

Date Extracted: 04/28/2008

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/12/2008

Injection Volume: 1.0 (uL) GPC Factor: 2.0

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	0.90	J
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.3	J
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	2.3	J
72-55-9	4,4'-DDE	2.1	J
72-20-8	Endrin	2.3	J
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	2.5	J
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.4	J
8001-35-2	Toxaphene	170	U

SOM01.2 (6/2007)

02004

1G - FORM I PEST  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
PLCS60(2)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: PLCS60

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: A10360

% Moisture: 0 Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SONC

Date Extracted: 04/28/2008

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/12/2008

Injection Volume: 1.0 (uL) GPC Factor: 2.0

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.1	J
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.4	J
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	2.9	J
72-55-9	4,4'-DDE	2.8	J
72-20-8	Endrin	3.1	J
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	J
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.5	J
8001-35-2	Toxaphene	170	U

SOM01.2 (6/2007)

02005

1G - FORM I PEST  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
PLCS64(1)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: PLCS64

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: A10399

% Moisture: 0 Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SONC

Date Extracted: 04/30/2008

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/13/2008

Injection Volume: 1.0 (uL) GPC Factor: 2.0

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.6	J
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.6	J
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.4	
72-55-9	4,4'-DDE	3.2	J
72-20-8	Endrin	3.6	
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	J
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.8	
8001-35-2	Toxaphene	170	U

SOM01.2 (6/2007)

02008

1G - FORM I PEST  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
PLCS64 (2)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: PLCS64

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: A10399

% Moisture: 0 Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SONC

Date Extracted: 04/30/2008

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/13/2008

Injection Volume: 1.0 (uL) GPC Factor: 2.0

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.5	J
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.7	
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.2	J
72-55-9	4,4'-DDE	3.7	
72-20-8	Endrin	3.4	
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	2.9	J
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	2.0	
8001-35-2	Toxaphene	170	U

SOM01.2 (6/2007)

02009

## 2R - Form II ARO-2

## SOIL AROCLOR SURROGATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2) RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	ABLK63	84	83	79	74			0
02	ALCS63	101	111	96	116			0
03	E0072	94	90	93	95			0
04	E0073	92	91	98	92			0
05	E0047	94	98	88	101			0
06	E0048	100	103	101	102			0
07	E0049	105	101	104	108			0
08	E0050	94	99	92	105			0
09	E0051	115	107	103	111			0
10	E0052	92	87	97	96			0
11	E0053	89	99	91	98			0
12	E0054	87	93	84	96			0
13	E0058	111	106	105	126			0
14	E0062	80	80	80	69			0
15	E0064	116	105	89	91			0
16	E0065	112	122	102	108			0
17	E0067	100	98	86	91			0
18	E0056	110	97	88	110			0
19	ABLK59	125	118	120	127			0
20	ALCS59	75	63	71	61			0
21	E0055	112	94	93	86			0
22	E0057	98	90	90	101			0
23	E0050MS	97	90	91	93			0
24	E0050MSD	124	118	115	113			0
25	E0060	114	109	117	116			0
26	E0061	73	49	87	71			0
27								
28								
29								
30								

TCX = Tetrachloro-m-xylene  
DCB = Decachlorobiphenyl

QC LIMITS  
(30-150)  
(30-150)

# Column to be used to flag recovery values  
\* Values outside of contract required QC limits  
D Surrogate diluted out.



2Q - FORM II ARO-1  
WATER AROCLOR SURROGATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032

Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2) RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	AIBLK11	107	99	110	106			0
02	AIBLK21	108	103	110	99			0
03	AIBLK31	106	100	110	98			0
04	AIBLK41	101	92	104	87			0
05	AIBLK51	70	87	68	84			0
06	AIBLK61	70	81	66	84			0
07	AIBLK71	78	86	77	78			0
08	AIBLKA1	120	103	121	103			0
09	AIBLKB1	99	83	101	96			0
10	AIBLKC1	88	85	84	74			0
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

TCX = Tetrachloro-m-xylene  
DCB = Decachlorobiphenyl

QC LIMITS  
(30-150)  
(30-150)

# Column to be used to flag recovery values  
\* Values outside of contract required QC limits  
D Surrogate diluted out

3K - FORM III ARO-2  
SOIL AROCLOR MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Matrix Spike - EPA Sample No.: E0050

Instrument ID: P-6890A

GC Column: RTX-CLP2 ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC #	QC LIMITS REC.
Aroclor-1016	155	208	303	61	29-135
Aroclor-1260	155	0	173	112	29-135

COMPOUND	SPIKE ADDED ug/Kg	MSD CONCENTRATION ug/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Aroclor-1016	155	324	75	21 *	15	29-135
Aroclor-1260	155	199	128	13	20	29-135

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 1 out of 2 outside limits

Spike Recovery: 0 out of 4 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

02067

3K - FORM III ARO-2  
SOIL AROCLOR MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Matrix Spike - EPA Sample No.: E0050

Instrument ID: P-6890B

GC Column: RTX-CLP ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC #	QC LIMITS REC.
Aroclor-1016	155	109	213	67	29-135
Aroclor-1260	155	0	169	109	29-135

COMPOUND	SPIKE ADDED ug/Kg	MSD CONCENTRATION ug/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Aroclor-1016	155	229	77	14	15	29-135
Aroclor-1260	155	185	119	9	20	29-135

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 2 outside limits

Spike Recovery: 0 out of 4 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

02068

3P - FORM III ARO-4  
SOIL AROCLOR LABORATORY CONTROL  
SAMPLE RECOVERY

EPA SAMPLE NO.  
ALCS59

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
Lab Sample ID: ALCS59 LCS Lot No.: A031346  
Date Extracted 04/27/2008 Date Analyzed (1): 05/13/2008  
Instrument ID (1): P-6890A GC Column (1): RTX-CLP2 ID: 0.53 (mm)

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
Aroclor-1016	33.3	33.0	99	50-150
Aroclor-1260	33.3	32.4	97	50-150

Instrument ID (2): P-6890B GC Column (2): RTX-CLP ID: 0.53 (mm)  
Date Analyzed (2): 05/13/2008

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
Aroclor-1016	33.3	28.7	86	50-150
Aroclor-1260	33.3	30.7	92	50-150

# Column to be used to flag recovery and RPD values with an asterisk  
\* Values outside of QC limits

LCS Recovery: 0 out of 4 outside limits

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

SOM01.1 (5/2005)

02069

3P - FORM III ARO-4  
SOIL AROCLOR LABORATORY CONTROL  
SAMPLE RECOVERY

EPA SAMPLE NO.

ALCS63

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Lab Sample ID: ALCS63

LCS Lot No.: A031346

Date Extracted 04/29/2008

Date Analyzed (1): 05/11/2008

Instrument ID (1): P-6890A

GC Column (1): RTX-CLP2 ID: 0.53 (mm)

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
Aroclor-1016	33.3	38.5	116	50-150
Aroclor-1260	33.3	38.2	115	50-150

Instrument ID (2): P-6890B

GC Column (2): RTX-CLP ID: 0.53 (mm)

Date Analyzed (2): 05/11/2008

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
Aroclor-1016	33.3	45.8	138	50-150
Aroclor-1260	33.3	45.8	138	50-150

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

LCS Recovery: 0 out of 4 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

02070



4F - FORM IV ARO  
AROCOR METHOD BLANK SUMMARY

EPA SAMPLE NO.

ABLK59

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
Lab Sample ID: ABLK59 Lab File ID: P17783  
Matrix: (SOIL/SED/WATER) SOIL Extraction: (Type) SONC Date Extracted: 04/27/2008  
Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) N  
Acid Cleanup: (Y/N) Y  
Date Analyzed (1): 05/13/2008 Date Analyzed (2): 05/13/2008  
Time Analyzed (1): 1615 Time Analyzed (2): 1652  
Instrument ID (1): P-6890A Instrument ID (2): P-6890B  
GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2): RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED (1)	DATE ANALYZED (2)
01	E0047	S-0873.01	05/11/2008	05/11/2008
02	E0048	S-0873.02	05/11/2008	05/11/2008
03	E0049	S-0873.03	05/11/2008	05/11/2008
04	E0050	S-0873.04	05/11/2008	05/11/2008
05	E0051	S-0873.05	05/11/2008	05/11/2008
06	E0052	S-0873.06	05/11/2008	05/11/2008
07	E0053	S-0873.07	05/11/2008	05/11/2008
08	E0054	S-0874.01	05/11/2008	05/11/2008
09	E0058	S-0874.05	05/11/2008	05/11/2008
10	E0062	S-0874.08	05/12/2008	05/12/2008
11	E0064	S-0874.09	05/12/2008	05/12/2008
12	E0065	S-0874.10	05/12/2008	05/12/2008
13	E0067	S-0874.11	05/12/2008	05/12/2008
14	E0056	S-0874.03	05/13/2008	05/13/2008
15	ALCS59	ALCS59	05/13/2008	05/13/2008
16	E0055	S-0874.02	05/13/2008	05/13/2008
17	E0057	S-0874.04	05/13/2008	05/13/2008
18	E0050MS	S-0874.04MS	05/13/2008	05/13/2008
19	E0050MSD	S-0874.04MSD	05/13/2008	05/13/2008
20	E0060	S-0874.06	05/13/2008	05/13/2008
21	E0061	S-0874.07	05/13/2008	05/13/2008
22				
23				
24				
25				
26				

COMMENTS: \_\_\_\_\_

4F - FORM IV ARO  
AROCOR METHOD BLANK SUMMARY

EPA SAMPLE NO.  
ABLK63

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
Lab Sample ID: ABLK63 Lab File ID: P17697  
Matrix: (SOIL/SED/WATER) SOIL Extraction: (Type) SONC Date Extracted: 04/29/2008  
Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) N  
Acid Cleanup: (Y/N) Y  
Date Analyzed (1): 05/11/2008 Date Analyzed (2): 05/11/2008  
Time Analyzed (1): 0230 Time Analyzed (2): 0306  
Instrument ID (1): P-6890A Instrument ID (2): P-6890B  
GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2): RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED (1)	DATE ANALYZED (2)
01	ALCS63	ALCS63	05/11/2008	05/11/2008
02	E0072	S-0878.01	05/11/2008	05/11/2008
03	E0073	S-0878.02	05/11/2008	05/11/2008
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: \_\_\_\_\_

8H - FORM VIII ARO  
AROCLOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/10/2008 05/11/2008  
Instrument ID: P-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 8.07		DCB: 21.51			
	EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #
					DCB RT #
01	AR1660111	P17681	5/10/2008	16:44	8.07
02	AR1660211	P17682	5/10/2008	17:21	8.07
03	AR1660311	P17683	5/10/2008	17:58	8.07
04	AR1660411	P17684	5/10/2008	18:34	8.07
05	AR1660511	P17685	5/10/2008	19:11	8.07
06	AR1221311	P17686	5/10/2008	19:48	8.07
07	AR1232311	P17687	5/10/2008	20:24	8.07
08	AR1242311	P17688	5/10/2008	21:01	8.07
09	AR1248311	P17689	5/10/2008	21:37	8.07
10	AR1254311	P17690	5/10/2008	22:14	8.07
11	AR1262311	P17691	5/10/2008	22:50	8.07
12	AR1268311	P17692	5/10/2008	23:27	8.07
13	AIBLK11	P17693	5/11/2008	00:03	8.07
14	AIBLK21	P17695	5/11/2008	01:16	8.07
15	AR1660321	P17696	5/11/2008	01:53	8.07
16	ABLK63	P17697	5/11/2008	02:30	8.07
17	ALCS63	P17698	5/11/2008	03:06	8.07
18	E0072	P17699	5/11/2008	03:43	8.07
19	E0073	P17700	5/11/2008	04:19	8.07
20	ZZZZZ	P17701	5/11/2008	04:56	8.07
21	ZZZZZ	P17702	5/11/2008	05:32	8.07
22	ZZZZZ	P17703	5/11/2008	06:09	8.07
23	ZZZZZ	P17704	5/11/2008	06:45	8.07
24	ZZZZZ	P17705	5/11/2008	07:22	8.07
25	ZZZZZ	P17706	5/11/2008	07:59	8.07
26	ZZZZZ	P17707	5/11/2008	08:35	8.07
27	ZZZZZ	P17708	5/11/2008	09:12	8.07
28	ZZZZZ	P17709	5/11/2008	09:48	8.07
29	ZZZZZ	P17710	5/11/2008	10:25	8.07
30	AIBLK31	P17711	5/11/2008	11:01	8.06
31	AR1660331	P17712	5/11/2008	11:38	8.06
32	AIBLK41	P17713	5/11/2008	12:15	8.06

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)  
DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8H - FORM VIII ARO  
AROCOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/10/2008 05/11/2008  
Instrument ID: P-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 8.07			DCB: 21.51		
	EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	
				TCX RT #	DCB RT #
01	AR1660341	P17714	5/11/2008	12:51	8.07 21.5
02	ZZZZZ	P17715	5/11/2008	14:08	8.07 21.5
03	ZZZZZ	P17716	5/11/2008	14:44	8.07 21.5
04	E0047	P17717	5/11/2008	15:21	8.07 21.5
05	E0048	P17718	5/11/2008	15:58	8.06 21.5
06	E0049	P17719	5/11/2008	16:34	8.06 21.5
07	E0050	P17720	5/11/2008	17:11	8.06 21.5
08	E0051	P17721	5/11/2008	17:47	8.06 21.49
09	E0052	P17722	5/11/2008	18:24	8.06 21.5
10	E0053	P17723	5/11/2008	19:01	8.06 21.5
11	E0054	P17724	5/11/2008	19:37	8.06 21.49
12	ZZZZZ	P17725	5/11/2008	20:14	8.06 21.49
13	ZZZZZ	P17726	5/11/2008	20:50	8.06 21.5
14	E0058	P17727	5/11/2008	21:27	8.06 21.49
15	ZZZZZ	P17728	5/11/2008	22:03	8.06 21.49
16	AIBLK51	P17729	5/11/2008	22:40	8.06 21.5
17	AR1660351	P17730	5/11/2008	23:16	8.06 21.49
18	AIBLK61	P17731	5/11/2008	23:53	8.06 21.49
19	AR1660361	P17732	5/12/2008	00:29	8.06 21.49
20	ZZZZZ	P17733	5/12/2008	01:06	8.06 21.5
21	ZZZZZ	P17734	5/12/2008	01:42	8.06 21.49
22	ZZZZZ	P17735	5/12/2008	02:19	8.06 21.5
23	ZZZZZ	P17736	5/12/2008	02:55	8.07 21.49
24	E0062	P17737	5/12/2008	03:32	8.06 21.5
25	ZZZZZ	P17738	5/12/2008	04:08	0 * 21.47
26	E0064	P17739	5/12/2008	04:45	8.06 21.49
27	E0065	P17740	5/12/2008	05:22	8.06 21.49
28	E0067	P17741	5/12/2008	05:58	8.06 21.49
29	AIBLK71	P17742	5/12/2008	06:35	8.06 21.49
30	AR166071	P17743	5/12/2008	07:11	8.06 21.49
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene (+ 0.05 MINUTES)  
DCB = Decachlorobiphenyl (+ 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8H - FORM VIII ARO  
AROCLOL ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/10/2008 05/11/2008  
Instrument ID: P-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN  
BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.02			DCB: 21.86		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 AR1660112	P17681	5/10/2008	17:21	9.03	21.87
02 AR1660212	P17682	5/10/2008	17:58	9.03	21.86
03 AR1660312	P17683	5/10/2008	18:34	9.02	21.86
04 AR1660412	P17684	5/10/2008	19:11	9.02	21.86
05 AR1660512	P17685	5/10/2008	19:48	9.02	21.86
06 AR1221312	P17686	5/10/2008	20:24	9.02	21.86
07 AR1232312	P17687	5/10/2008	21:01	9.02	21.86
08 AR1242312	P17688	5/10/2008	21:37	9.02	21.86
09 AR1248312	P17689	5/10/2008	22:14	9.02	21.86
10 AR1254312	P17690	5/10/2008	22:50	9.02	21.86
11 AR1262312	P17691	5/10/2008	23:27	9.03	21.87
12 AR1268312	P17692	5/11/2008	00:03	9.02	21.86
13 AIBLK12	P17693	5/11/2008	00:40	9.02	21.87
14 AIBLK22	P17695	5/11/2008	01:53	9.03	21.87
15 AR1660322	P17696	5/11/2008	02:30	9.02	21.87
16 ABLK63	P17697	5/11/2008	03:06	9.02	21.87
17 ALCS63	P17698	5/11/2008	03:43	9.02	21.86
18 E0072	P17699	5/11/2008	04:19	9.02	21.87
19 E0073	P17700	5/11/2008	04:56	9.02	21.86
20 ZZZZZ	P17701	5/11/2008	05:32	9.02	21.86
21 ZZZZZ	P17702	5/11/2008	06:09	9.02	21.86
22 ZZZZZ	P17703	5/11/2008	06:45	9.01	21.86
23 ZZZZZ	P17704	5/11/2008	07:22	9.01	21.86
24 ZZZZZ	P17705	5/11/2008	07:59	9.01	21.86
25 ZZZZZ	P17706	5/11/2008	08:35	9.01	21.86
26 ZZZZZ	P17707	5/11/2008	09:12	9.01	21.86
27 ZZZZZ	P17708	5/11/2008	09:48	9.01	21.86
28 ZZZZZ	P17709	5/11/2008	10:25	9.01	21.86
29 ZZZZZ	P17710	5/11/2008	11:01	9.01	21.86
30 AIBLK32	P17711	5/11/2008	11:38	9.01	21.86
31 AR1660332	P17712	5/11/2008	12:15	9.01	21.86
32 AIBLK42	P17713	5/11/2008	12:51	9.01	21.86

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)

DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.



8H - FORM VIII ARO  
AROCLOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/10/2008 05/11/2008

Instrument ID: P-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.02			DCB: 21.86		
	EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #
					DCB RT #
01	AR1660342	P17714	5/11/2008	13:28	9.01
02	ZZZZZ	P17715	5/11/2008	14:44	9.01
03	ZZZZZ	P17716	5/11/2008	15:21	9.01
04	E0047	P17717	5/11/2008	15:58	9.01
05	E0048	P17718	5/11/2008	16:34	9.01
06	E0049	P17719	5/11/2008	17:11	9.01
07	E0050	P17720	5/11/2008	17:47	9.01
08	E0051	P17721	5/11/2008	18:24	9.01
09	E0052	P17722	5/11/2008	19:01	9.01
10	E0053	P17723	5/11/2008	19:37	9.01
11	E0054	P17724	5/11/2008	20:14	9.01
12	ZZZZZ	P17725	5/11/2008	20:50	9.01
13	ZZZZZ	P17726	5/11/2008	21:27	9.01
14	E0058	P17727	5/11/2008	22:03	9.01
15	ZZZZZ	P17728	5/11/2008	22:40	9.01
16	AIBLK52	P17729	5/11/2008	23:16	9.01
17	AR1660352	P17730	5/11/2008	23:53	9.01
18	AIBLK62	P17731	5/12/2008	00:29	9.01
19	AR1660362	P17732	5/12/2008	01:06	9.02
20	ZZZZZ	P17733	5/12/2008	01:42	9.02
21	ZZZZZ	P17734	5/12/2008	02:19	9.01
22	ZZZZZ	P17735	5/12/2008	02:55	9.01
23	ZZZZZ	P17736	5/12/2008	03:32	9.02
24	E0062	P17737	5/12/2008	04:08	9.01
25	ZZZZZ	P17738	5/12/2008	04:45	0 *
26	E0064	P17739	5/12/2008	05:22	9.01
27	E0065	P17740	5/12/2008	05:58	9.02
28	E0067	P17741	5/12/2008	06:35	9.01
29	AIBLK72	P17742	5/12/2008	07:11	9.02
30	AR166072	P17743	5/12/2008	07:48	9.02
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene

( ± 0.05 MINUTES)

DCB = Decachlorobiphenyl

( ± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8H - FORM VIII ARO  
AROCOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008  
Instrument ID: P-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 8.06		DCB: 21.50			
	EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #
					DCB RT #
01	AR16601A1	P17756	5/12/2008	23:48	8.06
02	AR16602A1	P17757	5/13/2008	00:25	8.06
03	AR16603A1	P17758	5/13/2008	01:01	8.06
04	AR16604A1	P17759	5/13/2008	01:38	8.07
05	AR16605A1	P17760	5/13/2008	02:14	8.06
06	AR12213A1	P17761	5/13/2008	02:51	8.06
07	AR12323A1	P17762	5/13/2008	03:27	8.07
08	AR12423A1	P17763	5/13/2008	04:04	8.07
09	AR12483A1	P17764	5/13/2008	04:40	8.07
10	AR12543A1	P17765	5/13/2008	05:17	8.07
11	AR12623A1	P17766	5/13/2008	05:54	8.07
12	AR12683A1	P17767	5/13/2008	06:30	8.07
13	AIBLK1	P17768	5/13/2008	07:07	8.07
14	AR1248111	P17770	5/13/2008	08:20	8.07
15	AR1248211	P17771	5/13/2008	08:56	8.07
16	AR1248321	P17772	5/13/2008	09:33	8.07
17	AR1248411	P17773	5/13/2008	10:09	8.07
18	AR1248511	P17774	5/13/2008	10:46	8.07
19	AIBLKB1	P17775	5/13/2008	11:23	8.07
20	AR16603B1	P17776	5/13/2008	11:59	8.07
21	AR1248331	P17777	5/13/2008	12:36	8.07
22	ZZZZZ	P17778	5/13/2008	13:12	8.07
23	ZZZZZ	P17779	5/13/2008	13:49	8.07
24	ZZZZZ	P17780	5/13/2008	14:25	8.07
25	ZZZZZ	P17781	5/13/2008	15:02	8.07
26	E0056	P17782	5/13/2008	15:39	8.07
27	ABLK59	P17783	5/13/2008	16:15	8.07
28	ALCS59	P17784	5/13/2008	16:52	8.07
29	E0055	P17785	5/13/2008	17:28	8.07
30	E0057	P17786	5/13/2008	18:05	8.07
31	E0050MS	P17787	5/13/2008	18:42	8.07
32	E0050MSD	P17788	5/13/2008	19:18	8.07

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8H - FORM VIII ARO  
AROCLOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008  
Instrument ID: P-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 8.06			DCB: 21.50		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 E0060	P17789	5/13/2008	19:55	8.07	21.5
02 E0061	P17790	5/13/2008	20:31	8.08	21.5
03 AIBLKC1	P17791	5/13/2008	21:08	8.07	21.5
04 AR16603C1	P17792	5/13/2008	21:45	8.07	21.5
05 AR1248351	P17793	5/13/2008	22:21	8.07	21.5
06					
07					
08					
09					
10					
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QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)  
DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8H - FORM VIII ARO  
AROCOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008  
Instrument ID: P-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.01			DCB: 21.85		
	EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #
					DCB RT #
01	AR16601A2	P17756	5/13/2008	00:25	9.01
02	AR16602A2	P17757	5/13/2008	01:01	9.01
03	AR16603A2	P17758	5/13/2008	01:38	9.01
04	AR16604A2	P17759	5/13/2008	02:14	9
05	AR16605A2	P17760	5/13/2008	02:51	9.01
06	AR12213A2	P17761	5/13/2008	03:27	9.01
07	AR12323A2	P17762	5/13/2008	04:04	9.01
08	AR12423A2	P17763	5/13/2008	04:40	9.01
09	AR12483A2	P17764	5/13/2008	05:17	9.01
10	AR12543A2	P17765	5/13/2008	05:54	9.01
11	AR12623A2	P17766	5/13/2008	06:30	9.01
12	AR12683A2	P17767	5/13/2008	07:07	9.01
13	AIBLKA2	P17768	5/13/2008	07:43	9.01
14	AR1248112	P17770	5/13/2008	08:56	9.01
15	AR1248212	P17771	5/13/2008	09:33	9.01
16	AR1248322	P17772	5/13/2008	10:09	9.01
17	AR1248412	P17773	5/13/2008	10:46	9.01
18	AR1248512	P17774	5/13/2008	11:23	9.01
19	AIBLKB2	P17775	5/13/2008	11:59	9.01
20	AR16603B2	P17776	5/13/2008	12:36	9.02
21	AR1248332	P17777	5/13/2008	13:12	9.01
22	ZZZZZ	P17778	5/13/2008	13:49	9.01
23	ZZZZZ	P17779	5/13/2008	14:25	9.01
24	ZZZZZ	P17780	5/13/2008	15:02	9.01
25	ZZZZZ	P17781	5/13/2008	15:39	9.01
26	E0056	P17782	5/13/2008	16:15	9.01
27	ABLK59	P17783	5/13/2008	16:52	9.01
28	ALCS59	P17784	5/13/2008	17:28	9.01
29	E0055	P17785	5/13/2008	18:05	9.01
30	E0057	P17786	5/13/2008	18:42	9.01
31	E0050MS	P17787	5/13/2008	19:18	9.01
32	E0050MSD	P17788	5/13/2008	19:55	9.01

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8H - FORM VIII ARO  
AROCOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008  
Instrument ID: P-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.01		DCB: 21.85			
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 E0060	P17789	5/13/2008	20:31	9.01	21.86
02 E0061	P17790	5/13/2008	21:08	9.03	21.85
03 AIBLKC2	P17791	5/13/2008	21:45	9.01	21.86
04 AR16603C2	P17792	5/13/2008	22:21	9.01	21.85
05 AR1248352	P17793	5/13/2008	22:58	9.01	21.85
06					
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31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)  
DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.



1H - FORM I ARO  
AROCOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ALCS59(1)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: ALCS59

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: P17784

% Moisture: 0

Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SONC

Date Extracted: 04/27/2008

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 05/13/2008

Injection Volume: 1.0 (uL) GPC Factor: \_\_\_\_\_ Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	33	J
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	32	J
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

SOM01.2 (6/2007)

02330

1H - FORM I ARO  
 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
 ALCS59(2)

Lab Name: KAP TECHNOLOGIES, INC..

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: ALCS59

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: P17784

% Moisture: 0

Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SONC

Date Extracted: 04/27/2008

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 05/13/2008

Injection Volume: 1.0 (uL) GPC Factor: \_\_\_\_\_ Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	29	J
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	31	J
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

SOM01.2 (6/2007)

02331

1H - FORM I ARO  
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ALCS63(1)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0047

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: ALCS63

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: P17698

% Moisture: 0

Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SONC

Date Extracted: 04/29/2008

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 05/11/2008

Injection Volume: 1.0 (uL) GPC Factor: \_\_\_\_\_ Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	39	
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	38	
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

SOM01.2 (6/2007)

02334

1H - FORM I ARO  
 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
 ALCS63 (2)

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
 Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0047  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: ALCS63  
 Sample wt/vol: 30.00 (g/mL) G Lab File ID: P17698  
 % Moisture: 0 Decanted: (Y/N) N Date Received: \_\_\_\_\_  
 Extraction: (Type) SONC Date Extracted: 04/29/2008  
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/11/2008  
 Injection Volume: 1.0 (uL) GPC Factor: \_\_\_\_\_ Dilution Factor: 1.0  
 GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Sulfur Cleanup: (Y/N) N  
 Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	46	
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	46	
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

SOM01.2 (6/2007)

02335

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
ESD Central Regional Laboratory  
Data Tracking Form for Contract Samples

Sample Delivery Group: E0047 CERCLIS No: ILN000509228  
Case No: 37407 Site Name/Location: LAKE CALUMET Smelting + Refining (IL)  
Contractor or EPA Lab: Kap Technologies Data User: EPA  
No. of Samples: 20 Date Sampled or Date Received: 19 May 08

Have Chain-of-Custody records been received? Yes ☒ No ☐  
Have traffic reports or packing lists been received? Yes ☒ No ☐  
If no, are traffic report or packing list numbers written on the Chain-of-Custody Record?  
Yes ☐ No ☐  
If no, which traffic report or packing list numbers are missing?  
\_\_\_\_\_  
\_\_\_\_\_

Are basic data forms in? Yes ☒ No ☐  
No of samples claimed: 20 No. of samples received: \_\_\_\_\_

Received by: pdavis Date: 19 May 08

Received by LSSS: pdavis Date: 20 May 08

Review started: 6-3-8 Reviewer Signature: Stephanie Tobin

Total time spent on review: 28 hrs Date review completed: 6/10/08

Copied by: A. C. Harvey Date: June 25, 2008

Mailed to user by: \_\_\_\_\_ Date: \_\_\_\_\_

**DATA USER:**

Please fill in the blanks below and return this form to:  
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: \_\_\_\_\_ Date: \_\_\_\_\_

Data review received by: \_\_\_\_\_ Date: \_\_\_\_\_

Inorganic Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK
Organic Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK
Dioxin data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK
SAS Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK

**PROBLEMS:** Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Date: \_\_\_\_\_



ESAT Controlled Number: ESAT 5.17.00067-pd 19 June 08

DATE: June 19, 2008

IEPA

Attn: Mr. Mark Wagner

1001 North Grand Avenue East

P.O. Box 19276

Springfield, IL 62794-9276

SITE NAME: Lake Calumet Smelting & Refining (IL)

<u>CASE NO.</u>	<u>LAB</u>	<u>SAMPLES</u>	<u>SDG</u>	<u>MATRIX</u>
37407	Kap Technologies	8	E0074	soil

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

**Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.**

Data Received by: \_\_\_\_\_ Date: \_\_\_\_\_

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

Received by Data Management Coordinator, CRL for file.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

FROM: **U.S. EPA - Region 5**  
Sylvia Griffin  
Central Regional Laboratory  
536 S. Clark, 10th Floor  
Chicago, IL 60605

Sent By: Pat Johnson  
Data Coordinator  
ESAT Region 5 **TechLaw**

**RECEIVED**

JUN 23 2008

IEPA-BOL-FSRS

# ESAT5.16.00029UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
SUPERFUND DIVISIONack  
6-17-08

DATE:

SUBJECT: Review of Data

Received for Review on: May 19, 2008FROM: Stephen L. Ostrodka, Chief (SRT-4J)  
Superfund Field Services Section*for Steve Ostrodka  
Michael & Byrnie  
6/16/08*TO: Data User: IEPA

We have reviewed the data for the following case:

Site Name: Lake Calumet Smelting & Refining (IL)Case Number: 37407SDG Number: E0074Number and Type of Samples: 8 Soils (low level VOA, SVOA, pesticides, aroclors)Sample Numbers: E0074 - E0079, E0082, E0083Laboratory: KAP Technologies, Inc.

Hrs for Review: \_\_\_\_\_

Following are our findings:

*The data are usable and acceptable with the  
qualifications described in the attached narrative.  
Michael A Byrnie*CC: Howard Pham  
Region 5 TPO  
Mail Code: SRT-4J**RECEIVED**

JUN 23 2008

IEPA-BOL-FSRS

Case Number: 37407

SDG Number: E0074

Site Name: Lake Calumet Smelting & Refining (IL)

Laboratory: KAP Technologies, Inc.

**Below is a summary of the out-of-control audits and the possible effects on the data for this case:**

Eight (8) soil samples labeled E0074 - E0079, E0082 and E0083 were shipped to KAP Technologies, Inc. located in The Woodlands, Texas. All eight (8) soil samples were collected on April 23, 2008 and received on April 24, 2008 intact and properly cooled.

All samples were analyzed for the low level volatile, semivolatile, pesticide and aroclor target compounds. All samples were analyzed according to CLP SOW SOM01.2 and reviewed according to the NFG for SOM01.1 and the SOP for ESAT 5/TechLaw Validation of Contract Laboratory Program Organic Data (Version 2.1).

None of the samples in this SDG was designated by the samplers to be used for laboratory matrix spike / matrix spike duplicate analyses. Sample E0074 was used for laboratory matrix spike / matrix spike duplicate analyses.

No samples were identified as field blanks or field duplicates.

**1. HOLDING TIME**

No problems were found.

**2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE**

No problems were found.

**3. CALIBRATION**

The following low level volatile samples are associated with an initial calibration with a percent relative standard deviation (%RSD) that exceeded the criteria of 20%. The detected Bromomethane in VBLKAH is qualified "J". The non-detected compound is qualified "UJ".

Bromomethane

E0074, E0074MS, E0074MSD, E0075, E0075RE, E0076, E0076RE, E0077, E0077RE, E0078, E0079, E0079RE, E0082, E0083, VBLKAF, VBLKAH, VHBLK01

The following low level volatile samples are associated with an initial and/or continuing CCVs in which a DMC did not meet relative response factor (RRF50) criteria. Sample results are not qualified based on the DMC %RSD or RRF data alone.

1,4-Dioxane-d<sub>8</sub>

E0074, E0074MS, E0074MSD, E0075, E0075RE, E0076, E0076RE, E0077, E0077RE, E0078, E0079, E0079RE, E0082, E0083, VBLKAF, VBLKAH, VHBLK01

The following semivolatile samples are associated with an initial calibration with relative response factors (RRFs) outside criteria and a percent relative standard deviation (%RSD) that exceeded the criteria of 20%. Detected Pentachlorophenol in samples E0074MS and E0074MSD are qualified "J". The non-detected compound is qualified "R" because of the low RRF values.

Pentachlorophenol

E0074, E0074MS, E0074MSD, E0075, E0076, E0077, E0078, E0078DL, E0079, E0082, E0083, SBLK72

**4. BLANKS**

The following low level volatile samples have common contaminant analyte concentrations reported less than the CRQL. The associated method blank concentration has common contaminant analyte concentration less than 2X the CRQL. Detected compounds are qualified "U". Non-detected compounds are not qualified. Reported sample concentrations have been elevated to the CRQL.

Methylene chloride  
E0074MS, E0075RE, E0076RE, E0077RE

The following low level volatile samples have common contaminant analyte concentrations reported greater than the CRQL and less than 10X the method blank concentration. The associated method blank has common contaminant analyte concentration less than 2X the CRQL. Detected compounds are qualified "U". Non-detected compounds are not qualified. Sample concentrations have been reported as the adjusted CRQL.

Methylene chloride  
E0074MSD

The following volatile samples have analyte concentrations reported less than the CRQL. The associated method blank has analyte concentration less than the CRQL. Detected compounds are qualified "U". Bromomethane in VHBLK01 is ultimately qualified "UJ" because all calibration criteria were not met. Non-detected compounds are not qualified. Reported sample concentrations have been elevated to the CRQL.

Toluene  
E0075RE, E0076RE

Bromomethane  
VHBLK01

The following low level volatile samples have common contaminant analyte concentrations reported less than the CRQL. The associated storage blank has common contaminant analyte concentration less than 2X the CRQL. Detected compounds are qualified "U". Non-detected compounds are not qualified. Reported sample concentrations have been elevated to the CRQL.

Acetone  
E0074, E0074MS, E0074MSD, E0075, E0075RE, E0077RE, E0078, E0079,  
E0079RE, E0082

The following low level volatile samples have common contaminant analyte concentrations reported greater than the CRQL and less than 10X the storage blank concentration. The associated storage blank has common contaminant analyte concentration less than 2X the CRQL. Detected compounds are qualified "U". Non-detected compounds are not qualified. Sample concentrations have been reported as the adjusted CRQL.

Acetone  
E0076, E0076RE



Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

Page 5 of 13  
SDG Number: E0074  
Laboratory: KAP Technologies, Inc.

The following low level volatile samples have TIC concentrations reported less than 5X the method blank concentration. Detected compounds are qualified "U" and deleted from the TIC report.

E0075, E0075RE, E0076, E0076RE, E0077, E0077RE, E0078, E0079, E0079RE, E0082, E0083, VHBLK01

The following semivolatile samples have analyte concentrations reported less than the CRQL. The associated method blank has analyte concentration less than the CRQL. Detected compounds are qualified "U". Indeno(1,2,3-cd)pyrene in sample E0078 is ultimately qualified "UJ" because of low surrogate recovery. Non-detected compounds are not qualified. Reported sample concentrations have been elevated to the CRQL.

Indeno(1,2,3-cd)pyrene  
E0075, E0076, E0077, E0078, E0082, E0083

Benzo(g,h,i)perylene  
E0075, E0076, E0077, E0082, E0083

The following semivolatile samples have TIC concentrations reported less than 5X the method blank concentration. Detected compounds are qualified "U" and deleted from the TIC report.

E0075, E0077, E0082, E0083

## **5. DEUTERATED MONITORING COMPOUND AND SURROGATE RECOVERY**

The following low level volatile samples have DMC/SMC recoveries above the upper limit of the criteria window. Detected compounds are qualified "J". Non-detected compounds are not qualified for this criterion. Some non-detected compounds are ultimately qualified "UJ" because of low internal standard area counts and because all calibration criteria were not met.

E0074  
Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Bromomethane, Chloroethane, Carbon disulfide, Cyclohexane, Benzene, 1,4-Dioxane, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Isopropylbenzene

E0074MS  
Dichlorodifluoromethane, Chloromethane, Bromomethane, Chloroethane, Carbon Disulfide, Cyclohexane, Benzene, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Isopropylbenzene

Case Number: 37407

SDG Number: E0074

Site Name: Lake Calumet Smelting &amp; Refining (IL)

Laboratory: KAP Technologies, Inc.

E0074MSD, E0076, E0077, E0079RE

Cyclohexane, Benzene, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Isopropylbenzene

E0075, E0075RE

Cyclohexane, Benzene, 1,4-Dioxane, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, Toluene, Tetrachloroethene, Chlorobenzene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Isopropylbenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

E0076RE, E0077RE

Cyclohexane, Benzene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane

E0079, E0083

Cyclohexane, Benzene, 1,4-Dioxane, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Isopropylbenzene

The following semivolatile samples have deuterated monitoring compound recovery below the lower limit of the criteria window but greater than or equal to 0%. Detected compounds are qualified "J". Non-detected compounds are qualified "UJ".

E0078

Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene

The following pesticide samples have two or more surrogate recoveries greater than 150%. Detected compounds are qualified "J". Non-detected compounds are not qualified for this criterion.

E0083

The following pesticide samples have only one surrogate recovery value outside the acceptance criteria. Results are only qualified if two or more surrogate recoveries are outside the acceptance criteria. Detected and non-detected compounds are not qualified.

E0082, E0078DL2

The following diluted pesticide samples have two or more surrogate percent recoveries greater than 150%. Detected and non-detected compounds are not qualified because the dilution factor for the sample was equal to or greater than 5.0.

Reviewed by: Steffanie Tobin/Techlaw-ESAT

Date: June 13, 2008

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0074  
Laboratory: KAP Technologies, Inc.

E0082DL, E0083DL

#### 6A. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

None of the samples in this SDG was designated by the samplers to be used for laboratory matrix spike / matrix spike duplicate analyses. Sample E0074 was used for laboratory matrix spike / matrix spike duplicate analyses.

The relative percent difference (RPD) between the following low level volatile matrix spike and matrix spike duplicate recoveries is outside criteria. Chlorobenzene was not detected in the unspiked sample, E0074. Non-detected Chlorobenzene in the unspiked sample, E0074, is qualified "UJ".

E0074MS, E0074MSD  
Chlorobenzene

The following low level volatile matrix spike/matrix spike duplicate samples have percent recovery greater than the upper acceptance criteria. Detected Trichloroethene in the unspiked sample, E0074, is qualified "J". Non-detected compounds in the unspiked sample, E0074, are not qualified for this criterion but were ultimately qualified "UJ" because of low internal standard area counts.

E0074MS, E0074MSD  
Trichloroethene, Benzene, Toluene

The relative percent difference (RPD) between the following pesticide/aroclor matrix spike and matrix spike duplicate recoveries is outside criteria on only 1 GC column. Detected and non-detected compounds are not qualified as the lower of the 2 possible values (i.e. the reported value) is within the acceptance range.

E0074MS, E0074MSD  
Aroclor-1260

The relative percent difference (RPD) between the following aroclor matrix spike and matrix spike duplicate recoveries is outside criteria. Aroclor-1016 was not detected in the unspiked sample, E0074. Non-detected Aroclor-1016 in the unspiked sample, E0074, is qualified "UJ".

E0074MS, E0074MSD  
Aroclor-1016

#### 6B. LABORATORY CONTROL SAMPLE

No problems were found.

## 7. FIELD BLANK AND FIELD DUPLICATE

No samples were identified as field blanks or field duplicates.

## 8. INTERNAL STANDARDS

The following low level volatile samples have internal standard area counts that are less than the lower limit of the primary criteria but greater than 10% of the 12-hr Standard area count. Detected compounds are qualified "J". Non-detected compounds are qualified "UJ".

E0074, E0074MS

1,1,1-Trichloroethane, Cyclohexane, Carbon tetrachloride, Benzene, Trichloroethene, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane, cis-1,3-Dichloropropene, 4-Methyl-2-pentanone, Toluene, trans-1,3-Dichloropropene, 1,1,2-Trichloroethane, Tetrachloroethene, 2-Hexanone, Dibromochloromethane, 1,2-Dibromoethane, Chlorobenzene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Bromoform, Isopropylbenzene, 1,1,2,2-Tetrachloroethane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

E0074MSD, E0075, E0075RE, E0076, E0076RE, E0077, E0077RE, E0079, E0079RE, E0083

Bromoform, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

## 9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all low level VOA, SVOA, Pesticide and Aroclor compounds were properly identified.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following low level volatile samples have compound concentrations less than the CRQL. Detected compounds are qualified "J".

E0074

Methylene chloride, Trichloroethene

E0074MSD

m,p-Xylene

E0075

Methylene chloride, 4-Methyl-2-pentanone

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0074  
Laboratory: KAP Technologies, Inc.

E0076  
Toluene

E0078  
Trichloroethene, 1,4-Dichlorobennzene

E0083  
Methylene chloride, Toluene

VBLKAH  
Bromomethane, Methylene chloride, Toluene

VHBLK01  
Acetone

The following semivolatile samples have compound concentrations less than the CRQL.  
Detected compounds are qualified "J".

E0074MS, E0074MSD  
Acetophenone

E0075  
Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene,  
Bis(2-ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene,  
Benzo(a)pyrene, Dibenzo(a,h)anthracene

E0076  
Acenaphthylene, Anthracene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene,  
Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenzo(a,h)anthracene

E0077  
Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene,  
Benzo(a)pyrene, Dibenzo(a,h)anthracene

E0078  
Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene

E0078DL  
Acetophenone, 1,1'-Biphenyl, Acenaphthene, Fluorene, N-Nitroso-di-n-propylamine,  
Anthracene, Di-n-butylphthalate, Chrysene

E0079  
Acetophenone, 4-Methylphenol, Fluoranthene, Pyrene



Case Number: 37407

SDG Number: E0074

Site Name: Lake Calumet Smelting &amp; Refining (IL)

Laboratory: KAP Technologies, Inc.

E0082

Acenaphthylene, Phenanthrene, Anthracene, Bis(2-ethylhexyl)phthalate,  
Benzo(b)fluoranthene, Dibenzo(a,h)anthracene

E0083

Acenaphthylene, Phenanthrene, Bis(2-ethylhexyl)phthalate, Dibenzo(a,h)anthracene

SBLK72

Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

The following pesticide samples have compound concentrations less than the CRQL. Detected compounds are qualified "J".

E0074

4,4'-DDT

E0076

4,4'-DDE

E0077

4,4'-DDE, 4,4'-DDD

E0078DL

Endosulfan I

E0078DL2

4,4'-DDE, 4,4'-DDT

E0082

Heptachlor epoxide

E0082DL

4,4'-DDD

PLCS64

gamma-BHC, Heptachlor epoxide, Dieldrin, 4,4'-DDE, Endosulfan sulfate

The relative percent differences between analyte results for the following pesticide samples are greater than 25%. Detected compounds are qualified "J".

E0076

4,4'-DDT

E0078

Endosulfan I, 4,4'-DDE, 4,4'-DDD, 4,4'-DDT

Reviewed by: Steffanie Tobin/Techlaw-ESAT

Date: June 13, 2008

E0078DL  
4,4'-DDT

E0082  
Heptachlor epoxide

The following aroclor samples have compound concentrations less than the CRQL. Detected compounds are qualified "J".

E0074  
Aroclor-1260

The relative percent differences between analyte results for the following aroclor samples are greater than 25%. Detected compounds are qualified "J".

E0074  
Aroclor-1260

#### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baselines for the pesticide and aroclor analyses were acceptable.

#### 12. ADDITIONAL INFORMATION

The CADRE and EDD spreadsheets did not include the following pesticide and Aroclor samples. The laboratory Form Is for these samples are included with the hard copy data package.

ALCS63, PLCS64

The Raw data indicated the semivolatile samples and associated standards were analyzed on instrument ID number G-5973. Instrument ID number F-5973 was reported on forms V-SVOA, VI-SVOA, VII-SVOA and VIII-SVOA.

The following semivolatile samples have analyte concentrations which exceed the instruments calibration range. The detected results are qualified "J". The results from the diluted analyses should be considered the final concentrations for the affected analytes.

E0078  
2-Methylnaphthalene, Phenanthrene, Bis(2-ethylhexyl)phthalate

The following sample had a semivolatile target compound identified as a volatile TIC. The compound was detected in the semivolatile analysis; therefore no qualification is required for this problem.

Case Number: 37407  
 Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0074  
 Laboratory: KAP Technologies, Inc.

E0077

Benz[e]acephenanthrylene, i.e. Benzo(b)fluoranthene Cas No. 205-99-2

The SV Form Vs (SV Organic Instrument Performance Check - DFTPP) submitted with this SDG did not identify the values obtained for the ion abundances for m/e 441. The m/e 441 were re-calculated using m/e 198 as base peak by the reviewer. The results are summarized in the following table. All ion abundances were within the acceptance criteria.

STD ID	Instrument ID	Date/time analyzed	Reported m/e (%)	Corrected m/e (%)
DFTPP50	G-5973	05/13/08 10:43	79.96	11.92
DFTPP51	G-5973	05/13/08 15:26	74.39	10.23
DFTPP53	G-5973	05/13/08 23:10	74.84	11.78

The National Functional Guidelines Report #9 did not report the following compounds from the SV TIC forms

E0077: unknown-02 @ RT 17.85  
 E0082: unknown-01 @ RT 17.78  
 E0083: unknown-02 @ RT 17.78

No discussion of these TIC results was found in the Laboratory' SDG Narrative. Copies of the TIC Form and the Library Search Compound Report are included with the hardcopy validation package. The Reviewer was unable to determine if these discrepancies were lab-generated (software) or CADRE-generated with the current available data.

The following pesticide samples have analyte concentrations which exceed the instruments calibration range. The detected results are qualified "J". The results of 4,4'-DDE and 4,4'-DDT from sample E0078DL and the result of 4,4'-DDD from sample E0078DL2 should be considered the final concentrations.

E0078  
 4,4'-DDE, 4,4'-DDD, 4,4'-DDT

E0078DL  
 4,4'-DDD

The following pesticide samples have analyte concentrations which exceed the instruments calibration range. The detected results are qualified "J". The results from the diluted analyses should be considered the final concentrations for the affected analytes.

E0082, E0083  
 4,4'-DDE, 4,4'-DDT

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

Page 13 of 13  
SDG Number: E0074  
Laboratory: KAP Technologies, Inc.

CADRE Data Qualifier Sheet

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present.)

## Analytical Results (Qualified Data)

Page 1 of 20

Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Number of Soil Samples : 8

Reviewer :

Number of Water Samples : 0

Date :

Number of Sediment Samples : 0

Sample Number :	E0074		E0074MS		E0074MSD		E0075		E0075RE	
Sampling Location :	X120		X120		X120		X121		X121	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008						4/23/2008			
Time Sampled :										
%Moisture :	14		14		14		15		15	
pH :	6.1		6		6		5.6		5.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
Chloromethane	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
Vinyl chloride	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
Bromomethane	5.9	UJ	5.6	UJ	5.9	UJ	6.7	UJ	6.0	UJ
Chloroethane	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
Trichlorofluoromethane	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
1,1-Dichloroethene	5.9	U	48		50		6.7	U	6.0	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
Acetone	12	U	11	U	12	U	13	U	12	U
Carbon disulfide	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
Methyl acetate	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
Methylene chloride	2.6	J	5.6	U	14	U	2.9	J	6.0	U
trans-1,2-Dichloroethene	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
Methyl tert-butyl ether	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
1,1-Dichloroethane	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
cis-1,2-Dichloroethene	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
2-Butanone	12	U	11	U	12	U	13	U	12	U
Bromochloromethane	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
Chloroform	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
1,1,1-Trichloroethane	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
Cyclohexane	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
Carbon tetrachloride	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
Benzene	5.9	UJ	110	J	110	J	6.7	U	6.0	U
1,2-Dichloroethane	5.9	U	5.6	U	5.9	U	6.7	U	6.0	U
1,4-Dioxane	120	U	110	U	120	U	130	U	120	U
Trichloroethene	3.5	J	81	J	91	J	6.7	U	6.0	U
Methylcyclohexane	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
1,2-Dichloropropane	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
Bromodichloromethane	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
cis-1,3-Dichloropropene	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
4-Methyl-2-pentanone	12	UJ	11	UJ	12	U	2.4	J	12	U
Toluene	5.9	UJ	86	J	99	J	7.5	J	6.0	U
trans-1,3-Dichloropropene	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0074		E0074MS		E0074MSD		E0075		E0075RE	
Sampling Location :	X120		X120		X120		X121		X121	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008						4/23/2008			
Time Sampled :										
%Moisture :	14		14		14		15		15	
pH :	6.1		6		6		5.6		5.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
Tetrachloroethene	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
2-Hexanone	12	UJ	11	UJ	12	U	13	U	12	U
Dibromochloromethane	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
1,2-Dibromoethane	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
Chlorobenzene	5.9	UJ	59	J	77		6.7	U	6.0	U
Ethylbenzene	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
o-Xylene	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
m,p-Xylene	5.9	UJ	5.6	UJ	2.6	J	6.7	U	6.0	U
Styrene	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
Bromoform	5.9	UJ	5.6	UJ	5.9	UJ	6.7	UJ	6.0	UJ
Isopropylbenzene	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
1,1,2,2-Tetrachloroethane	5.9	UJ	5.6	UJ	5.9	U	6.7	U	6.0	U
1,3-Dichlorobenzene	5.9	UJ	5.6	UJ	5.9	UJ	6.7	UJ	6.0	UJ
1,4-Dichlorobenzene	5.9	UJ	5.6	UJ	5.9	UJ	6.7	UJ	6.0	UJ
1,2-Dichlorobenzene	5.9	UJ	5.6	UJ	5.9	UJ	6.7	UJ	6.0	UJ
1,2-Dibromo-3-chloropropane	5.9	UJ	5.6	UJ	5.9	UJ	6.7	UJ	6.0	UJ
1,2,4-Trichlorobenzene	5.9	UJ	5.6	UJ	5.9	UJ	6.7	UJ	6.0	UJ
1,2,3-Trichlorobenzene	5.9	UJ	5.6	UJ	5.9	UJ	6.7	UJ	6.0	UJ

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0076		E0076RE		E0077		E0077RE		E0078	
Sampling Location :	X202		X202		X203		X203		X204	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008				4/23/2008				4/23/2008	
Time Sampled :										
%Moisture :	40		40		51		51		64	
pH :	5.9		5.9		6.3		6.3		6.1	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	8.5	U	8.0	U	9.6	U	11	U	13	U
Chloromethane	8.5	U	8.0	U	9.6	U	11	U	13	U
Vinyl chloride	8.5	U	8.0	U	9.6	U	11	U	13	U
Bromomethane	8.5	UJ	8.0	UJ	9.6	UJ	11	UJ	13	UJ
Chloroethane	8.5	U	8.0	U	9.6	U	11	U	13	U
Trichlorofluoromethane	8.5	U	8.0	U	9.6	U	11	U	13	U
1,1-Dichloroethene	8.5	U	8.0	U	9.6	U	11	U	13	U
1,1,2-Trichloro-1,2,2-trifluoroethane	8.5	U	8.0	U	9.6	U	11	U	13	U
Acetone	30	U	21	U	19	U	22	U	26	U
Carbon disulfide	8.5	U	8.0	U	9.6	U	11	U	13	U
Methyl acetate	8.5	U	8.0	U	9.6	U	11	U	13	U
Methylene chloride	11		8.0	U	9.6	U	11	U	13	U
trans-1,2-Dichloroethene	8.5	U	8.0	U	9.6	U	11	U	13	U
Methyl tert-butyl ether	8.5	U	8.0	U	9.6	U	11	U	13	U
1,1-Dichloroethane	8.5	U	8.0	U	9.6	U	11	U	13	U
cis-1,2-Dichloroethene	8.5	U	8.0	U	9.6	U	11	U	13	U
2-Butanone	17	U	16	U	19	U	22	U	26	U
Bromochloromethane	8.5	U	8.0	U	9.6	U	11	U	13	U
Chloroform	8.5	U	8.0	U	9.6	U	11	U	13	U
1,1,1-Trichloroethane	8.5	U	8.0	U	9.6	U	11	U	13	U
Cyclohexane	8.5	U	8.0	U	9.6	U	11	U	13	U
Carbon tetrachloride	8.5	U	8.0	U	9.6	U	11	U	13	U
Benzene	8.5	U	8.0	U	9.6	U	11	U	13	U
1,2-Dichloroethane	8.5	U	8.0	U	9.6	U	11	U	13	U
1,4-Dioxane	170	U	160	U	190	U	220	U	260	U
Trichloroethene	8.5	U	8.0	U	9.6	U	11	U	6.0	J
Methylcyclohexane	8.5	U	8.0	U	9.6	U	11	U	13	U
1,2-Dichloropropane	8.5	U	8.0	U	9.6	U	11	U	13	U
Bromodichloromethane	8.5	U	8.0	U	9.6	U	11	U	13	U
cis-1,3-Dichloropropene	8.5	U	8.0	U	9.6	U	11	U	13	U
4-Methyl-2-pentanone	17	U	16	U	19	U	22	U	26	U
Toluene	4.8	J	8.0	U	9.6	U	11	U	13	U
trans-1,3-Dichloropropene	8.5	U	8.0	U	9.6	U	11	U	13	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0076		E0076RE		E0077		E0077RE		E0078	
Sampling Location :	X202		X202		X203		X203		X204	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008				4/23/2008				4/23/2008	
Time Sampled :										
%Moisture :	40		40		51		51		64	
pH :	5.9		5.9		6.3		6.3		6.1	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	8.5	U	8.0	U	9.6	U	11	U	13	U
Tetrachloroethene	8.5	U	8.0	U	9.6	U	11	U	13	U
2-Hexanone	17	U	16	U	19	U	22	U	26	U
Dibromochloromethane	8.5	U	8.0	U	9.6	U	11	U	13	U
1,2-Dibromoethane	8.5	U	8.0	U	9.6	U	11	U	13	U
Chlorobenzene	8.5	U	8.0	U	9.6	U	11	U	13	U
Ethylbenzene	8.5	U	8.0	U	9.6	U	11	U	13	U
o-Xylene	8.5	U	8.0	U	9.6	U	11	U	13	U
m,p-Xylene	8.5	U	8.0	U	9.6	U	11	U	13	U
Styrene	8.5	U	8.0	U	9.6	U	11	U	13	U
Bromoform	8.5	UJ	8.0	UJ	9.6	UJ	11	UJ	13	U
Isopropylbenzene	8.5	U	8.0	U	9.6	U	11	U	13	U
1,1,2,2-Tetrachloroethane	8.5	U	8.0	U	9.6	U	11	U	13	U
1,3-Dichlorobenzene	8.5	UJ	8.0	UJ	9.6	UJ	11	UJ	13	U
1,4-Dichlorobenzene	8.5	UJ	8.0	UJ	9.6	UJ	11	UJ	5.1	J
1,2-Dichlorobenzene	8.5	UJ	8.0	UJ	9.6	UJ	11	UJ	13	U
1,2-Dibromo-3-chloropropane	8.5	UJ	8.0	UJ	9.6	UJ	11	UJ	13	U
1,2,4-Trichlorobenzene	8.5	UJ	8.0	UJ	9.6	UJ	11	UJ	13	U
1,2,3-Trichlorobenzene	8.5	UJ	8.0	UJ	9.6	UJ	11	UJ	13	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0079		E0079RE		E0082		E0083		VBLKAF	
Sampling Location :	X205		X205		X122		X123			
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008				4/23/2008		4/23/2008			
Time Sampled :										
%Moisture :	37		37		24		22		0	
pH :	5.8		5.8		6.1		5.7			
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Chloromethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Vinyl chloride	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Bromomethane	8.3	UJ	7.8	UJ	6.9	UJ	6.8	UJ	5.0	UJ
Chloroethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Trichlorofluoromethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
1,1-Dichloroethene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
1,1,2-Trichloro-1,2,2-trifluoroethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Acetone	17	U	16	U	14	U	14	U	10	U
Carbon disulfide	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Methyl acetate	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Methylene chloride	8.3	U	7.8	U	6.9	U	2.4	J	5.0	U
trans-1,2-Dichloroethene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Methyl tert-butyl ether	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
1,1-Dichloroethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
cis-1,2-Dichloroethene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
2-Butanone	17	U	16	U	14	U	14	U	10	U
Bromochloromethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Chloroform	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
1,1,1-Trichloroethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Cyclohexane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Carbon tetrachloride	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Benzene	8.3	U	7.8	U	6.9	U	28	J	5.0	U
1,2-Dichloroethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
1,4-Dioxane	170	U	160	U	140	U	140	U	100	U
Trichloroethene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Methylcyclohexane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
1,2-Dichloropropane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Bromodichloromethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
cis-1,3-Dichloropropene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
4-Methyl-2-pentanone	17	U	16	U	14	U	14	U	10	U
Toluene	8.3	U	7.8	U	6.9	U	3.3	J	5.0	U
trans-1,3-Dichloropropene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0079	E0079RE		E0082		E0083		VBLKAF		
Sampling Location :	X205	X205		X122		X123				
Matrix :	Soil	Soil		Soil		Soil		Soil		
Units :	ug/Kg	ug/Kg		ug/Kg		ug/Kg		ug/Kg		
Date Sampled :	4/23/2008			4/23/2008		4/23/2008				
Time Sampled :										
%Moisture :	37	37		24		22		0		
pH :	5.8	5.8		6.1		5.7				
Dilution Factor :	1.0	1.0		1.0		1.0		1.0		
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Tetrachloroethene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
2-Hexanone	17	U	16	U	14	U	14	U	10	U
Dibromochloromethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
1,2-Dibromoethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Chlorobenzene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Ethylbenzene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
o-Xylene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
m,p-Xylene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Styrene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
Bromoform	8.3	UJ	7.8	UJ	6.9	U	6.8	UJ	5.0	U
Isopropylbenzene	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
1,1,2,2-Tetrachloroethane	8.3	U	7.8	U	6.9	U	6.8	U	5.0	U
1,3-Dichlorobenzene	8.3	UJ	7.8	UJ	6.9	U	6.8	UJ	5.0	U
1,4-Dichlorobenzene	8.3	UJ	7.8	UJ	6.9	U	6.8	UJ	5.0	U
1,2-Dichlorobenzene	8.3	UJ	7.8	UJ	6.9	U	6.8	UJ	5.0	U
1,2-Dibromo-3-chloropropane	8.3	UJ	7.8	UJ	6.9	U	6.8	UJ	5.0	U
1,2,4-Trichlorobenzene	8.3	UJ	7.8	UJ	6.9	U	6.8	UJ	5.0	U
1,2,3-Trichlorobenzene	8.3	UJ	7.8	UJ	6.9	U	6.8	UJ	5.0	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	VBLKAH	VHBLK01								
Sampling Location :										
Matrix :	Soil	Soil								
Units :	ug/Kg	ug/Kg								
Date Sampled :										
Time Sampled :										
%Moisture :	0	0								
pH :										
Dilution Factor :	1.0	1.0								
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0	U	5.0	U						
Chloromethane	5.0	U	5.0	U						
Vinyl chloride	5.0	U	5.0	U						
Bromomethane	2.0	J	5.0	UJ						
Chloroethane	5.0	U	5.0	U						
Trichlorofluoromethane	5.0	U	5.0	U						
1,1-Dichloroethene	5.0	U	5.0	U						
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	U						
Acetone	10	U	1.8	J						
Carbon disulfide	5.0	U	5.0	U						
Methyl acetate	5.0	U	5.0	U						
Methylene chloride	2.1	J	5.0	U						
trans-1,2-Dichloroethene	5.0	U	5.0	U						
Methyl tert-butyl ether	5.0	U	5.0	U						
1,1-Dichloroethane	5.0	U	5.0	U						
cis-1,2-Dichloroethene	5.0	U	5.0	U						
2-Butanone	10	U	10	U						
Bromochloromethane	5.0	U	5.0	U						
Chloroform	5.0	U	5.0	U						
1,1,1-Trichloroethane	5.0	U	5.0	U						
Cyclohexane	5.0	U	5.0	U						
Carbon tetrachloride	5.0	U	5.0	U						
Benzene	5.0	U	5.0	U						
1,2-Dichloroethane	5.0	U	5.0	U						
1,4-Dioxane	100	U	100	U						
Trichloroethene	5.0	U	5.0	U						
Methylcyclohexane	5.0	U	5.0	U						
1,2-Dichloropropane	5.0	U	5.0	U						
Bromodichloromethane	5.0	U	5.0	U						
cis-1,3-Dichloropropene	5.0	U	5.0	U						
4-Methyl-2-pentanone	10	U	10	U						
Toluene	4.4	J	5.0	U						
trans-1,3-Dichloropropene	5.0	U	5.0	U						

## Analytical Results (Qualified Data)

Page \_8\_ of \_20\_

Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	VBLKAH	VHBLK01								
Sampling Location :										
Matrix :	Soil	Soil								
Units :	ug/Kg	ug/Kg								
Date Sampled :										
Time Sampled :										
%Moisture :	0	0								
pH :										
Dilution Factor :	1.0	1.0								
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0	U	5.0	U						
Tetrachloroethene	5.0	U	5.0	U						
2-Hexanone	10	U	10	U						
Dibromochloromethane	5.0	U	5.0	U						
1,2-Dibromoethane	5.0	U	5.0	U						
Chlorobenzene	5.0	U	5.0	U						
Ethylbenzene	5.0	U	5.0	U						
o-Xylene	5.0	U	5.0	U						
m,p-Xylene	5.0	U	5.0	U						
Styrene	5.0	U	5.0	U						
Bromoform	5.0	U	5.0	U						
Isopropylbenzene	5.0	U	5.0	U						
1,1,2,2-Tetrachloroethane	5.0	U	5.0	U						
1,3-Dichlorobenzene	5.0	U	5.0	U						
1,4-Dichlorobenzene	5.0	U	5.0	U						
1,2-Dichlorobenzene	5.0	U	5.0	U						
1,2-Dibromo-3-chloropropane	5.0	U	5.0	U						
1,2,4-Trichlorobenzene	5.0	U	5.0	U						
1,2,3-Trichlorobenzene	5.0	U	5.0	U						

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Number of Soil Samples : 8

Number of Water Samples : 0

Reviewer :

Number of Sediment Samples : 0

Date :

Sample Number :	E0074		E0074MS		E0074MSD		E0075		E0076	
Sampling Location :	X120		X120		X120		X121		X202	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008						4/23/2008		4/23/2008	
Time Sampled :										
%Moisture :	14		14		14		15		40	
pH :	6.1		6.1		6.1		5.6		5.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	200	U	200	U	200	U	200	U	280	U
Phenol	200	U	930		940		200	U	280	U
Bis(2-chloroethyl)ether	200	U	200	U	200	U	200	U	280	U
2-Chlorophenol	200	U	880		880		200	U	280	U
2-Methylphenol	200	U	200	U	200	U	200	U	280	U
2,2'-Oxybis(1-chloropropane)	200	U	200	U	200	U	200	U	280	U
Acetophenone	200	U	85	J	85	J	200	U	280	U
4-Methylphenol	200	U	200	U	200	U	200	U	280	U
N-Nitroso-di-n-propylamine	200	U	890		900		200	U	280	U
Hexachloroethane	200	U	200	U	200	U	200	U	280	U
Nitrobenzene	200	U	200	U	200	U	200	U	280	U
Isophorone	200	U	200	U	200	U	200	U	280	U
2-Nitrophenol	200	U	200	U	200	U	200	U	280	U
2,4-Dimethylphenol	200	U	200	U	200	U	200	U	280	U
Bis(2-chloroethoxy)methane	200	U	200	U	200	U	200	U	280	U
2,4-Dichlorophenol	200	U	200	U	200	U	200	U	280	U
Naphthalene	200	U	200	U	200	U	200	U	280	U
4-Chloroaniline	200	U	200	U	200	U	200	U	280	U
Hexachlorobutadiene	200	U	200	U	200	U	200	U	280	U
Caprolactam	200	U	200	U	200	U	200	U	280	U
4-Chloro-3-methylphenol	200	U	1000		1100		200	U	280	U
2-Methylnaphthalene	200	U	200	U	200	U	200	U	280	U
Hexachlorocyclopentadiene	200	U	200	U	200	U	200	U	280	U
2,4,6-Trichlorophenol	200	U	200	U	200	U	200	U	280	U
2,4,5-Trichlorophenol	200	U	200	U	200	U	200	U	280	U
1,1'-Biphenyl	200	U	200	U	200	U	200	U	280	U
2-Chloronaphthalene	200	U	200	U	200	U	200	U	280	U
2-Nitroaniline	380	U	390	U	380	U	390	U	550	U
Dimethylphthalate	200	U	200	U	200	U	200	U	280	U
2,6-Dinitrotoluene	200	U	200	U	200	U	200	U	280	U
Acenaphthylene	200	U	200	U	200	U	200	U	69	J
3-Nitroaniline	380	U	390	U	380	U	390	U	550	U
Acenaphthene	200	U	970		1000		200	U	280	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0074		E0074MS		E0074MSD		E0075		E0076	
Sampling Location :	X120		X120		X120		X121		X202	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008						4/23/2008		4/23/2008	
Time Sampled :										
%Moisture :	14		14		14		15		40	
pH :	6.1		6.1		6.1		5.6		5.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	380	U	390	U	380	U	390	U	550	U
4-Nitrophenol	380	U	1200		1400		390	U	550	U
Dibenzofuran	200	U	200	U	200	U	200	U	280	U
2,4-Dinitrotoluene	200	U	1000		1100		200	U	280	U
Diethylphthalate	200	U	200	U	200	U	200	U	280	U
Fluorene	200	U	200	U	200	U	200	U	280	U
4-Chlorophenyl-phenylether	200	U	200	U	200	U	200	U	280	U
4-Nitroaniline	380	U	390	U	380	U	390	U	550	U
4,6-Dinitro-2-methylphenol	380	U	390	U	380	U	390	U	550	U
N-Nitrosodiphenylamine	200	U	200	U	200	U	200	U	280	U
1,2,4,5-Tetrachlorobenzene	200	U	200	U	200	U	200	U	280	U
4-Bromophenyl-phenylether	200	U	200	U	200	U	200	U	280	U
Hexachlorobenzene	200	U	200	U	200	U	200	U	280	U
Atrazine	200	U	200	U	200	U	200	U	280	U
Pentachlorophenol	380	R	1400	J	1600	J	390	R	550	R
Phenanthrene	200	U	200	U	200	U	52	J	430	
Anthracene	200	U	200	U	200	U	200	U	74	J
Carbazole	200	U	200	U	200	U	200	U	280	U
Di-n-butylphthalate	200	U	200	U	200	U	200	U	280	U
Fluoranthene	200	U	200	U	200	U	120	J	520	
Pyrene	200	U	1100		1100		110	J	390	
Butylbenzylphthalate	200	U	200	U	200	U	200	U	280	U
3,3'-Dichlorobenzidine	200	U	200	U	200	U	200	U	280	U
Benzo(a)anthracene	200	U	200	U	200	U	62	J	210	J
Chrysene	200	U	200	U	200	U	80	J	210	J
Bis(2-ethylhexyl)phthalate	420		1100		1200		74	J	280	U
Di-n-octylphthalate	200	U	200	U	200	U	200	U	280	U
Benzo(b)fluoranthene	200	U	200	U	200	U	61	J	150	J
Benzo(k)fluoranthene	200	U	200	U	200	U	53	J	140	J
Benzo(a)pyrene	200	U	200	U	200	U	71	J	180	J
Indeno(1,2,3-cd)pyrene	200	U	200	U	200	U	200	U	280	U
Dibenzo(a,h)anthracene	200	U	200	U	200	U	42	J	56	J
Benzo(g,h,i)perylene	200	U	200	U	200	U	200	U	280	U
2,3,4,6-Tetrachlorophenol	200	U	200	U	200	U	200	U	280	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0077		E0078		E0078DL		E0079		E0082	
Sampling Location :	X203		X204		X204		X205		X122	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008		4/23/2008				4/23/2008		4/23/2008	
Time Sampled :										
%Moisture :	51		64		64		37		24	
pH :	6.3		6.1		6.1		5.8		6.1	
Dilution Factor :	1.0		1.0		4.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	350	U	470	U	1900	U	270	U	220	U
Phenol	350	U	470	U	1900	U	270	U	220	U
Bis(2-chloroethyl)ether	350	U	470	U	1900	U	270	U	220	U
2-Chlorophenol	350	U	470	U	1900	U	270	U	220	U
2-Methylphenol	350	U	470	U	1900	U	270	U	220	U
2,2'-Oxybis(1-chloropropane)	350	U	470	U	1900	U	270	U	220	U
Acetophenone	350	U	830		730	J	85	J	220	U
4-Methylphenol	350	U	470	U	1900	U	120	J	220	U
N-Nitroso-di-n-propylamine	350	U	470	U	1900	U	270	U	220	U
Hexachloroethane	350	U	470	U	1900	U	270	U	220	U
Nitrobenzene	350	U	470	U	1900	U	270	U	220	U
Isophorone	350	U	470	U	1900	U	270	U	220	U
2-Nitrophenol	350	U	470	U	1900	U	270	U	220	U
2,4-Dimethylphenol	350	U	470	U	1900	U	270	U	220	U
Bis(2-chloroethoxy)methane	350	U	470	U	1900	U	270	U	220	U
2,4-Dichlorophenol	350	U	470	U	1900	U	270	U	220	U
Naphthalene	350	U	6800		7300		270	U	220	U
4-Chloroaniline	350	U	470	U	1900	U	270	U	220	U
Hexachlorobutadiene	350	U	470	U	1900	U	270	U	220	U
Caprolactam	350	U	470	U	1900	U	270	U	220	U
4-Chloro-3-methylphenol	350	U	470	U	1900	U	270	U	220	U
2-Methylnaphthalene	350	U	11000	J	12000		270	U	220	U
Hexachlorocyclopentadiene	350	U	470	U	1900	U	270	U	220	U
2,4,6-Trichlorophenol	350	U	470	U	1900	U	270	U	220	U
2,4,5-Trichlorophenol	350	U	470	U	1900	U	270	U	220	U
1,1'-Biphenyl	350	U	1600		1500	J	270	U	220	U
2-Chloronaphthalene	350	U	470	U	1900	U	270	U	220	U
2-Nitroaniline	670	U	910	U	3600	U	520	U	430	U
Dimethylphthalate	350	U	470	U	1900	U	270	U	220	U
2,6-Dinitrotoluene	350	U	470	U	1900	U	270	U	220	U
Acenaphthylene	350	U	470	U	1900	U	270	U	52	J
3-Nitroaniline	670	U	910	U	3600	U	520	U	430	U
Acenaphthene	350	U	960		970	J	270	U	220	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0077		E0078		E0078DL		E0079		E0082	
Sampling Location :	X203		X204		X204		X205		X122	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008		4/23/2008				4/23/2008		4/23/2008	
Time Sampled :										
%Moisture :	51		64		64		37		24	
pH :	6.3		6.1		6.1		5.8		6.1	
Dilution Factor :	1.0		1.0		4.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	670	U	910	U	3600	U	520	U	430	U
4-Nitrophenol	670	U	910	U	3600	U	520	U	430	U
Dibenzofuran	350	U	6100		6800		270	U	220	U
2,4-Dinitrotoluene	350	U	470	U	1900	U	270	U	220	U
Diethylphthalate	350	U	470	U	1900	U	270	U	220	U
Fluorene	350	U	1500		1600	J	270	U	220	U
4-Chlorophenyl-phenylether	350	U	470	U	1900	U	270	U	220	U
4-Nitroaniline	670	U	910	U	3600	U	520	U	430	U
4,6-Dinitro-2-methylphenol	670	U	910	U	3600	U	520	U	430	U
N-Nitrosodiphenylamine	350	U	820		860	J	270	U	220	U
1,2,4,5-Tetrachlorobenzene	350	U	470	U	1900	U	270	U	220	U
4-Bromophenyl-phenylether	350	U	470	U	1900	U	270	U	220	U
Hexachlorobenzene	350	U	470	U	1900	U	270	U	220	U
Atrazine	350	U	470	U	1900	U	270	U	220	U
Pentachlorophenol	670	R	910	R	3600	R	520	R	430	R
Phenanthrene	520		13000	J	16000		270	U	210	J
Anthracene	350	U	1200		1300	J	270	U	60	J
Carbazole	350	U	470	U	1900	U	270	U	220	U
Di-n-butylphthalate	350	U	800		810	J	270	U	220	U
Fluoranthene	480		3800		4100		70	J	510	
Pyrene	550		1900		2200		60	J	400	
Butylbenzylphthalate	350	U	470	U	1900	U	270	U	220	U
3,3'-Dichlorobenzidine	350	U	470	U	1900	U	270	U	220	U
Benzo(a)anthracene	220	J	2200		2400		270	U	250	
Chrysene	220	J	950		1200	J	270	U	310	
Bis(2-ethylhexyl)phthalate	350	U	7600	J	9200		270	U	73	J
Di-n-octylphthalate	350	U	470	U	1900	U	270	U	220	U
Benzo(b)fluoranthene	140	J	200	J	1900	U	270	U	220	J
Benzo(k)fluoranthene	130	J	260	J	1900	U	270	U	230	
Benzo(a)pyrene	190	J	150	J	1900	U	270	U	240	
Indeno(1,2,3-cd)pyrene	350	U	470	UJ	1900	U	270	U	220	U
Dibenzo(a,h)anthracene	80	J	470	UJ	1900	U	270	U	87	J
Benzo(g,h,i)perylene	350	U	470	UJ	1900	U	270	U	220	U
2,3,4,6-Tetrachlorophenol	350	U	470	U	1900	U	270	U	220	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0083	SBLK72								
Sampling Location :	X123									
Matrix :	Soil	Soil								
Units :	ug/Kg	ug/Kg								
Date Sampled :	4/23/2008									
Time Sampled :										
%Moisture :	22	0								
pH :	5.7									
Dilution Factor :	1.0	1.0								
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	220	U	170	U						
Phenol	220	U	170	U						
Bis(2-chloroethyl)ether	220	U	170	U						
2-Chlorophenol	220	U	170	U						
2-Methylphenol	220	U	170	U						
2,2'-Oxybis(1-chloropropane)	220	U	170	U						
Acetophenone	220	U	170	U						
4-Methylphenol	220	U	170	U						
N-Nitroso-di-n-propylamine	220	U	170	U						
Hexachloroethane	220	U	170	U						
Nitrobenzene	220	U	170	U						
Isophorone	220	U	170	U						
2-Nitrophenol	220	U	170	U						
2,4-Dimethylphenol	220	U	170	U						
Bis(2-chloroethoxy)methane	220	U	170	U						
2,4-Dichlorophenol	220	U	170	U						
Naphthalene	220	U	170	U						
4-Chloroaniline	220	U	170	U						
Hexachlorobutadiene	220	U	170	U						
Caprolactam	220	U	170	U						
4-Chloro-3-methylphenol	220	U	170	U						
2-Methylnaphthalene	220	U	170	U						
Hexachlorocyclopentadiene	220	U	170	U						
2,4,6-Trichlorophenol	220	U	170	U						
2,4,5-Trichlorophenol	220	U	170	U						
1,1'-Biphenyl	220	U	170	U						
2-Chloronaphthalene	220	U	170	U						
2-Nitroaniline	420	U	330	U						
Dimethylphthalate	220	U	170	U						
2,6-Dinitrotoluene	220	U	170	U						
Acenaphthylene	60	J	170	U						
3-Nitroaniline	420	U	330	U						
Acenaphthene	220	U	170	U						

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0083	SBLK72								
Sampling Location :	X123									
Matrix :	Soil	Soil								
Units :	ug/Kg	ug/Kg								
Date Sampled :	4/23/2008									
Time Sampled :										
%Moisture :	22	0								
pH :	5.7									
Dilution Factor :	1.0	1.0								
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	420	U	330	U						
4-Nitrophenol	420	U	330	U						
Dibenzofuran	220	U	170	U						
2,4-Dinitrotoluene	220	U	170	U						
Diethylphthalate	220	U	170	U						
Fluorene	220	U	170	U						
4-Chlorophenyl-phenylether	220	U	170	U						
4-Nitroaniline	420	U	330	U						
4,6-Dinitro-2-methylphenol	420	U	330	U						
N-Nitrosodiphenylamine	220	U	170	U						
1,2,4,5-Tetrachlorobenzene	220	U	170	U						
4-Bromophenyl-phenylether	220	U	170	U						
Hexachlorobenzene	220	U	170	U						
Atrazine	220	U	170	U						
Pentachlorophenol	420	R	330	R						
Phenanthrene	170	J	170	U						
Anthracene	220	U	170	U						
Carbazole	220	U	170	U						
Di-n-butylphthalate	220	U	170	U						
Fluoranthene	450		170	U						
Pyrene	380		170	U						
Butylbenzylphthalate	220	U	170	U						
3,3'-Dichlorobenzidine	220	U	170	U						
Benzo(a)anthracene	230		170	U						
Chrysene	300		170	U						
Bis(2-ethylhexyl)phthalate	72	J	170	U						
Di-n-octylphthalate	220	U	170	U						
Benzo(b)fluoranthene	300		170	U						
Benzo(k)fluoranthene	230		170	U						
Benzo(a)pyrene	260		170	U						
Indeno(1,2,3-cd)pyrene	220	U	18	J						
Dibenzo(a,h)anthracene	89	J	170	U						
Benzo(g,h,i)perylene	220	U	17	J						
2,3,4,6-Tetrachlorophenol	220	U	170	U						

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Number of Soil Samples : 8

Number of Water Samples : 0

Number of Sediment Samples : 0

Date :

Sample Number :	E0074		E0074MS		E0074MSD		E0075		E0076	
Sampling Location :	X120		X120		X120		X121		X202	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008						4/23/2008		4/23/2008	
Time Sampled :										
%Moisture :	14		14		14		15		40	
pH :	6.1		6.1		6.1		5.6		5.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	2.0	U	2.0	U	2.0	U	2.0	U	2.8	U
beta-BHC	2.0	U	2.0	U	2.0	U	2.0	U	2.8	U
delta-BHC	2.0	U	2.0	U	2.0	U	2.0	U	2.8	U
gamma-BHC (Lindane)	2.0	U	14		12		2.0	U	2.8	U
Heptachlor	2.0	U	12		11		2.0	U	2.8	U
Aldrin	2.0	U	13		11		2.0	U	2.8	U
Heptachlor epoxide	2.0	U	2.0	U	2.0	U	2.0	U	2.8	U
Endosulfan I	2.0	U	2.0	U	2.0	U	2.0	U	2.8	U
Dieldrin	3.8	U	26		23		3.9	U	5.4	U
4,4'-DDE	3.8	U	3.9	U	3.8	U	3.9	U	4.2	J
Endrin	3.8	U	27		24		3.9	U	5.4	U
Endosulfan II	3.8	U	3.9	U	3.8	U	3.9	U	5.4	U
4,4'-DDD	3.8	U	3.9	U	3.8	U	3.9	U	5.4	U
Endosulfan sulfate	3.8	U	3.9	U	3.8	U	3.9	U	5.4	U
4,4'-DDT	3.5	J	24		21		3.9	U	13	J
Methoxychlor	20	U	20	U	20	U	20	U	28	U
Endrin ketone	3.8	U	3.9	U	3.8	U	3.9	U	5.4	U
Endrin aldehyde	3.8	U	3.9	U	3.8	U	3.9	U	5.4	U
alpha-Chlordane	2.0	U	2.0	U	2.0	U	2.0	U	2.8	U
gamma-Chlordane	2.0	U	2.0	U	2.0	U	2.0	U	2.8	U
Toxaphene	200	U	200	U	200	U	200	U	280	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0077		E0078		E0078DL		E0078DL2		E0079	
Sampling Location :	X203		X204		X204				X205	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008		4/23/2008						4/23/2008	
Time Sampled :										
%Moisture :	51		64		64		64		37	
pH :	6.3		6.1		6.1		6.1		5.8	
Dilution Factor :	1.0		1.0		20.0		80.0		1.0	
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	3.5	U	4.7	U	94	U	380	U	2.7	U
beta-BHC	3.5	U	4.7	U	94	U	380	U	2.7	U
delta-BHC	3.5	U	4.7	U	94	U	380	U	2.7	U
gamma-BHC (Lindane)	3.5	U	4.7	U	94	U	380	U	2.7	U
Heptachlor	3.5	U	4.7	U	94	U	380	U	2.7	U
Aldrin	3.5	U	4.7	U	94	U	380	U	2.7	U
Heptachlor epoxide	3.5	U	4.7	U	94	U	380	U	2.7	U
Endosulfan I	3.5	U	27	J	43	J	380	U	2.7	U
Dieldrin	6.7	U	9.2	U	180	U	740	U	5.2	U
4,4'-DDE	6.3	J	420	J	730		500	J	5.2	U
Endrin	6.7	U	9.2	U	180	U	740	U	5.2	U
Endosulfan II	6.7	U	9.2	U	180	U	740	U	5.2	U
4,4'-DDD	3.6	J	770	J	4800	J	3100		5.2	U
Endosulfan sulfate	6.7	U	9.2	U	180	U	740	U	5.2	U
4,4'-DDT	19		580	J	1200	J	700	J	9.9	
Methoxychlor	35	U	47	U	940	U	3800	U	27	U
Endrin ketone	6.7	U	9.2	U	180	U	740	U	5.2	U
Endrin aldehyde	6.7	U	9.2	U	180	U	740	U	5.2	U
alpha-Chlordane	3.5	U	4.7	U	94	U	380	U	2.7	U
gamma-Chlordane	3.5	U	24		94	U	380	U	2.7	U
Toxaphene	350	U	470	U	9400	U	38000	U	270	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0082		E0082DL		E0083		E0083DL		PBLK64	
Sampling Location :	X122		X122		X123		X123			
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008				4/23/2008					
Time Sampled :										
%Moisture :	24		24		22		22		0	
pH :	6.1		6.1		5.7		5.7			
Dilution Factor :	1.0		20.0		1.0		10.0		1.0	
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	2.2	U	44	U	2.2	U	22	U	1.7	U
beta-BHC	2.2	U	44	U	2.2	U	22	U	1.7	U
delta-BHC	2.2	U	44	U	2.2	U	22	U	1.7	U
gamma-BHC (Lindane)	2.2	U	44	U	2.2	U	22	U	1.7	U
Heptachlor	2.2	U	44	U	2.2	U	22	U	1.7	U
Aldrin	2.2	U	44	U	2.2	U	22	U	1.7	U
Heptachlor epoxide	1.5	J	44	U	2.8	J	22	U	1.7	U
Endosulfan I	2.2	U	44	U	2.2	U	22	U	1.7	U
Dieldrin	4.3	U	86	U	4.2	U	42	U	3.3	U
4,4'-DDE	130	J	270		160	J	200		3.3	U
Endrin	4.3	U	86	U	4.2	U	42	U	3.3	U
Endosulfan II	4.3	U	86	U	4.2	U	42	U	3.3	U
4,4'-DDD	33		80	J	38	J	49		3.3	U
Endosulfan sulfate	4.3	U	86	U	4.2	U	42	U	3.3	U
4,4'-DDT	120	J	200		180	J	150		3.3	U
Methoxychlor	22	U	440	U	22	U	220	U	17	U
Endrin ketone	4.3	U	86	U	4.2	U	42	U	3.3	U
Endrin aldehyde	4.3	U	86	U	4.2	U	42	U	3.3	U
alpha-Chlordane	2.2	U	44	U	2.2	U	22	U	1.7	U
gamma-Chlordane	2.2	U	44	U	2.2	U	22	U	1.7	U
Toxaphene	220	U	4400	U	220	U	2200	U	170	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Number of Soil Samples : 8

Number of Water Samples : 0

Number of Sediment Samples : 0

Date :

Sample Number :	ABLK63		E0074		E0074MS		E0074MSD		E0075	
Sampling Location :			X120		X120		X120		X121	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :			4/23/2008						4/23/2008	
Time Sampled :										
%Moisture :	0		14		14		14		15	
pH :			6.1		6.1		6.1		5.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	33	U	38	U	110		130		39	U
Aroclor-1221	33	U	38	U	38	U	38	U	39	U
Aroclor-1232	33	U	38	U	38	U	38	U	39	U
Aroclor-1242	33	U	38	U	38	U	38	U	39	U
Aroclor-1248	33	U	38	U	38	U	38	U	39	U
Aroclor-1254	33	U	38	U	38	U	38	U	39	U
Aroclor-1260	33	U	20	J	120		150		39	U
Aroclor-1262	33	U	38	U	38	U	38	U	39	U
Aroclor-1268	33	U	38	U	38	U	38	U	39	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0076		E0077		E0078		E0079		E0082	
Sampling Location :	X202		X203		X204		X205		X122	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	4/23/2008		4/23/2008		4/23/2008		4/23/2008		4/23/2008	
Time Sampled :										
%Moisture :	40		51		64		37		24	
pH :	5.9		6.3		6.1		5.8		6.1	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	54	U	67	U	91	U	52	U	44	U
Aroclor-1221	54	U	67	U	91	U	52	U	44	U
Aroclor-1232	54	U	67	U	91	U	52	U	44	U
Aroclor-1242	54	U	67	U	91	U	52	U	44	U
Aroclor-1248	54	U	67	U	91	U	52	U	44	U
Aroclor-1254	54	U	67	U	91	U	52	U	44	U
Aroclor-1260	54	U	67	U	91	U	52	U	44	U
Aroclor-1262	54	U	67	U	91	U	52	U	44	U
Aroclor-1268	54	U	67	U	91	U	52	U	44	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0074

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0083									
Sampling Location :	X123									
Matrix :	Soil									
Units :	ug/Kg									
Date Sampled :	4/23/2008									
Time Sampled :										
%Moisture :	22									
pH :	5.7									
Dilution Factor :	1.0									
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	42	U								
Aroclor-1221	42	U								
Aroclor-1232	42	U								
Aroclor-1242	42	U								
Aroclor-1248	42	U								
Aroclor-1254	42	U								
Aroclor-1260	42	U								
Aroclor-1262	42	U								
Aroclor-1268	42	U								

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0077 Location=X203 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	17.35	540	UG/KG J
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	17.78	580	NJ
	Unknown-03	18.11	1200	J
000205-99-2	Benz[e]acephenanthrylene	18.58	780	NJ
	Unknown-04	19.49	550	J
	Unknown-05	19.69	520	J
	Unknown-06	19.74	530	J
	Unknown-07	19.95	600	J
	Unknown-08	20.21	500	J
	Unknown-09	20.56	760	J



## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0078 Location=X204 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000090-12-0	Naphthalene, 1-methyl-	10.31	5600	UG/KG NJ
018636-59-4	1,4-Cyclohexadiene, 6-methylene-3,3-diphenyl-	16.35	5100	NJ
	Unknown-01	16.4	2600	J
	Unknown-02	17.75	4100	J
000611-49-4	Naphthalene, 1-(2-naphthalenylloxy)-	17.85	6100	NJ
000611-49-4	Naphthalene, 1-(2-naphthalenylloxy)-	18.1	4600	NJ
	Unknown-03	18.18	5400	J
000611-49-4	Naphthalene, 1-(2-naphthalenylloxy)-	18.57	2700	NJ
000611-49-4	Naphthalene, 1-(2-naphthalenylloxy)-	18.64	6400	NJ
000207-93-2	Dinaphtho[1,2-b:1',2'-d]furan	18.71	2000	NJ
000611-49-4	Naphthalene, 1-(2-naphthalenylloxy)-	18.77	5800	NJ
	Unknown-04	18.83	5900	J
	Unknown-05	19.5	3200	J
027980-52-5	9-Benzylidenexanthene	19.73	4800	NJ
014113-80-5	Cyclodecacyclododecene, 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18-octadecahydro-	19.96	3000	NJ
	Unknown-06	20.39	1800	J
	Unknown-07	20.52	2000	J
	Unknown-08	20.59	1800	J
	Unknown-09	20.7	2900	J
	Unknown-10	22.35	1900	J

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0078DL Location=No TR data Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000090-12-0	Naphthalene, 1-methyl-	10.3	6100	UG/KG DNJ
	Unknown-01	16.32	22000	DJ
	Unknown-02	17.71	9900	DJ
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	17.8	24000	DNJ
	Unknown-03	18.15	13000	DJ
012283-14-6	Iron, (eta-5-2,4-cyclopentadien-1-yl)[(1,2,3,3a,7a-eta-5)-4,5,6,7-tetrahydro-4-hydroxy-5-methyl-1H	18.54	6600	DNJ
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	18.6	17000	DNJ
	Unknown-04	18.67	6500	DJ
012283-14-6	Iron, (eta-5-2,4-cyclopentadien-1-yl)[(1,2,3,3a,7a-eta-5)-4,5,6,7-tetrahydro-4-hydroxy-5-methyl-1H	18.72	13000	DNJ
	Unknown-05	18.78	18000	DJ
	Unknown-06	19.46	6300	DJ
	Unknown-07	19.69	12000	DJ
	Unknown-08	19.91	8700	DJ
	Unknown-09	20.35	6000	DJ
	Unknown-10	20.66	7200	DJ

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0079 Location=X205 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	17.78	890	UG/KG NJ
057866-08-7	Tetracosanal	19.36	490	NJ
	Unknown-01	20.56	530	J
	Unknown-02	20.84	700	J
	Unknown-03	21.89	1100	J
	Unknown-04	22.03	460	J
	Unknown-05	22.35	620	J
	Unknown-06	23.44	530	J
033055-28-6	12-Oleanen-3-yl acetate, (3.alpha.)-	23.66	710	NJ

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0082 Location=X122 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000789-02-6	o,p'-DDT	16.7	320	UG/KG NJ
	Unknown-02	18.1	420	J
000111-02-4	2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	18.29	270	NJ
	Unknown-03	18.65	250	J
	Unknown-04	19.07	260	J
	Unknown-05	19.14	290	J
	Unknown-06	19.24	280	J
	Unknown-07	19.49	390	J
	Unknown-08	20.56	280	J
	Unknown-09	21.88	290	J
000559-74-0	Friedelan-3-one	24.86	490	NJ

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0083 Location=X123 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	17.34	450	UG/KG J
	Unknown-03	18.34	310	J
	Unknown-04	18.66	340	J
	Unknown-05	19.07	290	J
	Unknown-06	19.14	310	J
	Unknown-07	19.94	320	J
	Unknown-08	20.41	330	J
	Unknown-09	20.55	400	J
	Unknown-10	20.73	560	J
	Unknown-11	23.61	300	J
	Unknown-12	24.87	440	J



## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=SBLK72 Location=No TR data Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	17.57	120	UG/KG J
	Unknown-02	17.72	110	J
	Unknown-03	17.92	110	J
	Unknown-04	18.73	110	J
000215-58-7	Benzo[b]triphenylene	21	200	NJ

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0074 Location=X120 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	21.84	120 UG/KG	J
	Unknown-02	23.47	490	J
	Unknown-03	23.55	180	J
	Unknown-04	23.64	200	J
004453-90-1	1,4-Methanonaphthalene, 1,4-dihydro-	23.78	340	NJ
	Unknown-05	23.89	130	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

***Tentatively identified Compounds***

VOA Low Med Sample=E0075 Location=X121 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	4.65	7.4	UG/KG J
000556-67-2	Cyclotetrasiloxane, octamethyl-	15.32	9.3	NJ
	Unknown-03	16.53	7.7	J
	Unknown-04	18.76	9.9	J

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0075RE Location=No TR data Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	2.71	7.0	UG/KG J
000556-67-2	Cyclotetrasiloxane, octamethyl-	15.32	7.5	NJ

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0076 Location=X202 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)    SDG E0074    Case 37407    Contract EPW05032    Region 5    DDTID 59099    SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med    Sample=E0076RE    Location=No TR data    Matrix=Soil    Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc)    SDG E0074    Case 37407    Contract EPW05032    Region 5    DDTID 59099    SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med    Sample=E0077    Location=X203    Matrix=Soil    Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000556-67-2	Cyclotetrasiloxane, octamethyl-	15.31 16		NJ
	Unknown-02	18.75 12		J

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc)	SDG E0074	Case 37407	Contract EPW05032	Region 5	DDTID 59099	SOW SOM01.2
<i>Tentatively identified Compounds</i>						
VOA Low Med		Sample=E0077RE	Location=No TR data		Matrix=Soil	Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0078 Location=X204 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000556-67-2	Cyclotetrasiloxane, octamethyl	15.31	14	NJ

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0079 Location=X205 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000556-67-2	Cyclotetrasiloxane, octamethyl-	15.32	11	NJ
	Unknown-02	18.75	11	J

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0079RE Location=No TR data Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	2.72	8.1	UG/KG J
000593-79-3	Dimethyl selenide	5.1	12	NJ

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0082 Location=X122 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0083 Location=X123 Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000556-67-2	Cyclotetrasiloxane, octamethyl-	15.33	8.2	NJ
	Unknown-02	16.69	7.7	J
	Unknown-03	18.76	7.2	J
	Unknown-04	19.31	6.9	J
	Unknown-05	23.47	12	J
	Unknown-06	23.54	7.9	J

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

VOA\_Low\_Med Sample=VBLKAF Location=No\_TR\_data Matrix=Soil Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	10.31	97	UG/KG J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc)	SDG E0074	Case 37407	Contract EPW05032	Region 5	DDTID 59099	SOW SOM01.2
<b><i>Tentatively identified Compounds</i></b>						
VOA_Low_Med	Sample=VBLKAH	Location=No_IR_data	Matrix=Soil	Level=LOW		

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000110-54-3	Hexane	4.63	5.9	UG/KG NJ
	Unknown-01	10.3	96	J

## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc)	SDG E0074	Case 37407	Contract EPW05032	Region 5	DDTID 59099	SOW SOM01.2
<i>Tentatively identified Compounds</i>						
VOA Low Med		Sample=VHBLK01	Location=No TR data		Matrix=Soil	Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

4:57 Sat, May 17, 2008

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0074 Location=X120 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	17.8	1600 UG/KG	J
	Unknown-02	17.93	550	J
	Unknown-03	18.3	840	J
	Unknown-04	18.46	450	J
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	18.59	730	NJ
000207-93-2	Dinaphtho[1,2-b:1',2'-d]furan	18.77	460	NJ
	Unknown-05	19.25	1100	J
	Unknown-06	19.46	690	J
000226-98-2	Dibenzo(a,d)phenazine	19.7	430	NJ
	Unknown-07	19.95	590	J
002425-85-6	2-Naphthalenol, 1-[(4-methyl-2-nitrophenyl)azo]-	20.45	680	NJ
154352-87-1	Dinaphtho[2,3-b:1',2'-d]pyran-7-one	20.87	410	NJ
	Unknown-08	21	620	J
	Unknown-09	22.34	450	J

## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0075 Location=X121 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	15.19	420	UG/KG J
	Unknown-02	15.46	500	J
	Unknown-03	16.27	1000	J
	Unknown-04	16.54	580	J
	Unknown-05	17.47	500	J
	Unknown-07	17.96	780	J
	Unknown-08	18.19	890	J
	Unknown-09	18.31	770	J
040071-70-3	Cholestane, (5.alpha.,14.beta.)-	18.66	990	NJ
	Unknown-10	19.15	500	J
000481-21-0	Cholestane	19.25	820	NJ
	Unknown-11	19.39	720	J
	Unknown-12	19.51	590	J
066563-30-2	Bacchotricuneatin c	19.7	460	NJ
	Unknown-13	19.79	660	J
	Unknown-14	19.95	1800	J
	Unknown-15	20.3	400	J
000127-43-5	1-Penten-3-one, 1-(2,6,6-trimethyl-1-cyclohexen-1-yl)-	20.57	510	NJ
	Unknown-16	20.72	400	J
	Unknown-17	21.51	680	J
	Unknown-18	22.34	490	J
	Unknown-19	23.21	430	J



## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0074 Case 37407 Contract EPW05032 Region 5 DDTID 59099 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0076 Location=X202 Matrix=SOIL Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
001705-84-6	Triphenylene, 2-methyl-	17.6	540	UG/KG NJ
000611-49-4	Naphthalene, 1-(2-naphthalenyloxy)-	17.78	470	NJ
	Unknown-01	19.07	380	J
	Unknown-02	19.94	750	J
	Unknown-03	20.1	370	J
	Unknown-04	20.29	520	J
	Unknown-05	20.56	410	J
	Unknown-06	20.78	520	J
	Unknown-07	21.33	480	J
	Unknown-08	22.32	540	J
	Unknown-09	22.72	420	J

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

DATE:

SUBJECT: Review of Data  
Received for Review on 19 May 2008

FROM: Stephen L. Ostrodka, Chief (SRT-4J)  
Superfund Field Services Section

TO: Data User: IEPA

We have reviewed the data for the following case:

SITE NAME: LAKE CALUMET Smelting + Refining (IL)

CASE NUMBER: 37407 SDG NUMBER: E0074

Number and Type of Samples: 8 Soil Samples

Sample Numbers: E0074-79; E0082-83

Laboratory: Kap Technologies Hrs for Review: \_\_\_\_\_

Following are our findings:

CC: Howard Pham  
Region 5 TPO  
Mail Code: SRT-4J



## Contract Laboratory Program

### Sample Delivery Group (SDG) Cover Sheet

SDG Number E0074

Laboratory Name Kap Technologies Inc Lab Code KAP

Contract No. EPW05032 Case No. 37407

Analysis Price \_\_\_\_\_ SDG Turnaround 21 Days

#### EPA Sample Numbers in SDG (Listed in Numerical Order)

1) E0074	7) E0082	13)	19)
2) E0075	8) E0083	14)	20)
3) E0076	9)	15)	21)
4) E0077	10)	16)	22)
5) E0078	11)	17)	23)
6) E0079	12)	18)	24)

First Sample in SDG

E0074

Last Sample in SDG

E0083

First Sample Receipt Date  
Date

04/24/08

Last Sample Receipt

04/24/08

**Note:** There are a maximum of 20 **field** samples [excluding Performance Evaluation (PE) samples] in an

SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature \_\_\_\_\_

Date 4/28/08



USEPA Contract Laboratory Program  
Organic Traffic Report & Chain of Custody Record

Case No:	37407
DAS No:	
SDG No:	E0074
For Lab Use Only	
Lab Contract No:	EPW05032
Unit Price:	
Transfer To:	
Lab Contract No:	
Unit Price:	

Date Shipped:	4/23/2008
Carrier Name:	UPS
Airbill:	126215892210027130
Shipped to:	KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065
Relinquished By	Signature: [Signature] (Date / Time)
Received By	Signature: [Signature] (Date / Time)
1	Signature: [Signature] 4/23/2008
2	
3	
4	Signature: [Signature] 4/24/08 10:15

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0070	Ground Water/ Jerry Willman	L/G	VOA-SOM (21)	5-264064 (Ice Only), 5-264065 (Ice Only) (2)	TB101	S: 4/23/2008	8:45	
E0071	Field QC/ Jerry Willman	L/G	CLP-PEST/P (21), SVOA-SOM (21), VOA-SOM (21)	5-264068 (HCL), 5-264069 (HCL), 5-264070 (Ice Only), 5-264071 (Ice Only) (4)	FB101	S: 4/23/2008	9:00	ME0071
E0072	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264073 (Ice Only), 5-264074 (Ice Only) (2)	X118	S: 4/23/2008	9:00	ME0072
E0073	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264077 (Ice Only), 5-264078 (Ice Only) (2)	X119	S: 4/23/2008	9:00	ME0073
E0074	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264081 (Ice Only), 5-264082 (Ice Only) (2)	X120	S: 4/23/2008	10:25	ME0074
E0075	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264085 (Ice Only), 5-264086 (Ice Only) (2)	X121	S: 4/23/2008	11:00	ME0075
E0076	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-264090 (Ice Only), 5-264091 (Ice Only), 5-264092 (Ice Only) (3)	X202	S: 4/23/2008	12:40	ME0076
E0077	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-264094 (Ice Only), 5-264095 (Ice Only), 5-264096 (Ice Only) (3)	X203	S: 4/23/2008	12:40	ME0077
E0078	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-264098 (Ice Only), 5-264099 (Ice Only), 5-303479 (Ice Only) (3)	X204	S: 4/23/2008	13:20	ME0078
E0079	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-303481 (Ice Only), 5-303482 (Ice Only), 5-303483 (Ice Only) (3)	X205	S: 4/23/2008	13:45	ME0079

ORIGINAL  
Case 37407 SDG E0066  
Episode 5-0877 Init/Date 4/24/08

\$-0878.0358  
.04  
.05  
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.07  
.08

Shipment for Case Complete 7N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 2°C	Chain of Custody Seal Number: 89316 89317
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Initialed? [X]	Shipment Initialed? [X]
ARO,PST,SV = CLP-SVOA, PEST/AROCLO-SOM, CLP-PEST/P = CLP-Pesticides/Aroclor-SOM, Encore = CLP-VOA-Encore, SVOA-SOM = CLP-SVOA-Encore, VOA-SOM = CLP-VOA-SOM				

IR Number: 5-162075208-042308-0004

PM provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

LABORATORY COPY

F2/61.047 Page 1 of 2



USEPA Contract Laboratory Program  
Organic Traffic Report & Chain of Custody Record

Date Shipped: 4/23/2008		Case No: 37407	
Carrier Name: UPS		DAS No: E0074	
Airbill: 126215892210027130		SDG No: E0047w	
Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065		For Lab Use Only	
		Lab Contract No: EPW05032	
		Unit Price:	
		Transfer To:	
		Lab Contract No:	
		Unit Price:	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY	
							INORGANIC SAMPLE No.	Sample Condition On Receipt
E0082	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-303497 (Ice Only), 5-303499 (Ice Only) (2)	X122	S: 4/23/2008 18:00	ME0082	S-0878.09
E0083	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-303501 (Ice Only), 5-303503 (Ice Only) (2)	X123	S: 4/23/2008 18:00	ME0083	10 find

Shipment for Case Complete Y/N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 24	Chain of Custody Seal Number: 89316, 89317
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? Y	Shipment Iced? Y
ARO,PST,SV = CLP-SVOA, PEST/AROCOLOR-SOM, CLP-PEST/P = CLP-Pesticides/Aroclor-SOM, Encore = CLP-VOA-Encore, SVOA-SOM = CLP-SVOA-SOM, VOA-SOM = CLP-VOA-SOM				

**KAP TECHNOLOGIES, INC.**  
**9391 Grogans Mill Rd, Suite A2 • The Woodlands, TX 77380 • Phone (281) 367-0065**

<b>Contract No. EPW05032</b>	<b>Case No. 37407</b>	<b>SDG No. E0074</b>
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**SDG NARRATIVE**

**SAMPLE RECEIPT:**

**On 04/24/08 @ 10:15 A.M.** - Received two coolers via UPS with shipment number 1Z6215892210027158 and 7130. The cooler temperatures were 2<sup>0</sup>C and 2<sup>0</sup>C.

The cooler contained the following samples for VOA, BNA, PEST and AROCLOR analyses.  
The custody seals and the samples were intact.

<b>EPA SAMPLE ID</b>	<b>pH</b>	<b>EPA SAMPLE ID</b>	<b>pH</b>
E0074	NA	E0074MS	NA
E0075	NA	E0074MSD	NA
E0076	NA	E0075RE	NA
E0077	NA	E0076RE	NA
E0077	NA	E0077RE	NA
E0078	NA	E0079ER	NA
E0079	NA		
E0082	NA		
E0083	NA		

No problems were encountered during sample receiving and login.

**VOA SOIL SAMPLE:**

The sample for Low-Med-VOA was analyzed on instrument B-5973 GC/MS using a 30 meters long RTX-VMS column having a 0.25mm ID and 3µm film thickness. The trap used was OV-1/Tenax/Silica Gel (Tekmar #6 CAT #14-1755-003).

A 10 mL purge volume and heated purge was used for soil volatile sample analysis; blanks and calibration standards. The concentrations of the standards and spikes were maintained at the levels required by the Statement of Work (SOW).

The samples were analyzed for Volatiles according the SOM 1.2 statement of work.

The samples E0075, E0076, E0077 and E0079 had failed in surrogate recovery and/or internal standards and were reanalyzed. Upon reanalysis again failed due to matrix interference. Both the analyses were reported and are billable.

No problems were encountered during the analysis of this sample.

001



Contract No. EPW05032

Case No. 37407

SDG No. E0074

### SDG NARRATIVE

**The formula used to calculate the Sample concentration:**

**LOW-MED-VOA SOIL SAMPLE:**

$$\text{Concentration in ug/L} = \frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(W_s)(D)}$$

Where,

$A_x$  = Area of the characteristic ion (EICP) for the compound to be measured.

$A_{is}$  = Area of the characteristic ion (EICP) for the internal standard.

$I_s$  = Amount of internal standard added in ng.

$RRF$  = Mean relative Response Factor from the initial calibration standard.

$$D = \frac{100 - \% \text{ Moisture}}{100}$$

$W_s$  = Weight of sample added to the purge tube, in g.

**SEMIVOLATILES:**

The soil sample was extracted on 5/01/08 using sonication method as per statement of work SOM1.2. The sample was cleaned by the GPC. No problems were encountered during the extraction and analysis.

The samples were analyzed on instrument F-5973 GC/MS using a 30 meters long RTX-5MS column having a 0.25mm ID and 0.25µm film thickness.

The sample E0078 had the target compound concentrations above the calibration range and was analyzed using the dilution. Both the analyses were reported and are billable.

**The formula used to calculate the Sample concentration:**

**SOIL SAMPLES:**

$$\text{Concentration of Soil, Sediment sample ug/kg} = \frac{(A_x)(I_s)(V_t)(DF)(GPC)}{(A_{is})(RRF)(V_i)(W_s)(D)}$$

Where,

$A_x$ ,  $I_s$ ,  $V_{in}$ ,  $V_{out}$  are given for water, above.

$V_t$  = Volume of concentrated extract in uL.

$V_i$  = Volume of extract injected.

$GPC$  = GPC cleaning Factor.

$$D = \frac{100 - \% \text{ moisture}}{100}$$

002

Contract No. EPW05032

Case No. 37407

SDG No. E0074

### SDG NARRATIVE

100

Ws = Weight of sample extract.

RRF = Mean relative Response Factor determined from the initial calibration standard.

DF = Dilution Factor.

### PESTICIDES:

The Soil sample was extracted on 4/30/08 using sonication method as per statement of work SOM1.2. The soil sample was cleaned by GPC. After GPC clean up the extract was concentrated to a final volume of 5mL.

No problems were encountered during extraction and sample analyses.

1) RTX-CLP2: 30m\*0.53mmID\*0.41um film thickness. (Primary Column)

2) RTX-CLP: 30m\*0.53mmID\*0.50um film thickness. (Confirmation Column)

A 1uL injection was used.

The sample E0043 had high target compound concentrations above the calibrations and was analyzed using the dilution. Both the analyses were reported and are billable.

### The formula used to calculate the Sample concentration:

#### SOIL SAMPLES:

$$\text{Concentration of Target compound in soil/sediment} = \frac{(Ax)(Vt)(DF)(GPC)}{(CF)(Vt)(Ws)(D)}$$

Where,

Ax = Response of the compound to be measured.

CF = Mean calibration factor from the initial calibration (area/ng)

Vt = 5,000 uL.

Vi = Volume of extract injected.

Ws = Weight of sample extracted.

GPC = GPC Factor

DF = Dilution Factor

D =  $\frac{100 - \% \text{moisture}}{100}$

### AROCLORS:

The soil sample was extracted on 4/29/08 using sonication method as per statement of work SOM1.2. No problems were encountered during extraction.

All samples were analyzed on a P-6890 GC using two columns manufactured by Restek

003

KAP TECHNOLOGIES, INC.

9391 Grogans Mill Rd, Suite A2 • The Woodlands, TX 77380 • Phone (281) 367-0065

Contract No. EPW05032

Case No. 37407

SDG No. E0074

SDG NARRATIVE

RTX – CLP2: 30m\*0.53mmID\*0.41um film thickness. (Primary Column)

RTX – CLP: 30m\*0.53mmID\*0.50um film thickness. (Confirmation Column)

A 1uL injection was used.

The formula used to calculate the Sample concentration:

SOIL SAMPLE:

$$\text{Concentration of Target compound in soil/sediment} = \frac{(Ax)(Vt)(DF)}{(CF)(Vt)(Ws)(D)}$$

Ax = Response of the compound to be measured.

CF = Mean calibration factor from the initial calibration (area/ng)

Vt = 10,000 uL.

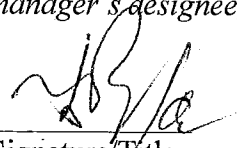
Vi = Volume of extract injected.

Ws = Weight of sample extracted.

$$D = \frac{100 - \% \text{moisture}}{100}$$

DF = Dilution Factor.

*I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy sample data package and in the electronic data deliverable has been authorized by the laboratory manager or the manager's designee, as verified by the following signature:*

  
Signature/Title

5/15/08  
Date of Signature

005

2C - FORM II VOA-3  
SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKAF	97	90	76	74	93	90	100
02	E0075	119	125	82	99	112	106	193 *
03	E0074	130 *	145 *	86	101	109	95	212 *
04	E0083	118	124	84	73	105	97	190 *
05	E0076	104	108	77	59	98	86	161 *
06	VBLKAH	97	85	76	69	93	87	102
07	E0077	114	126	88	65	101	85	157 *
08	E0078	97	100	76	67	94	82	116
09	E0079	103	104	82	76	98	85	139 *
10	E0075RE	112	121	88	85	111	102	177 *
11	E0076RE	98	103	75	56	90	80	131 *
12	E0082	88	97	71	59	90	82	112
13	E0074MS	119	133 *	101	85	113	96	205 *
14	E0074MSD	110	124	100	68	103	91	182 *
15	E0077RE	97	110	77	55	94	83	134 *
16	E0079RE	113	129	84	59	101	92	178 *
17	VHBLK01	92	92	77	76	97	97	97
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

QC LIMITS

VDMC1 (VCL) = Vinyl Chloride-d3

(68-122)

VDMC2 (CLA) = Chloroethene-d5

(61-130)

VDMC3 (DCE) = 1,1-Dichloroethene-d2

(45-132)

VDMC4 (BUT) = 2-Butanone-d5

(20-182)

VDMC5 (CLF) = Chloroform-d

(72-123)

VDMC6 (DCA) = 1,2-Dichloroethane-d4

(79-122)

VDMC7 (BEN) = Benzene-d6

(80-121)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

2D - FORM II VOA-4  
SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Level: ( LOW/MED) LOW

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (DXE) #	VDMC13 (TCA) #	VDMC14 (DCZ) #	TOT OUT
01	VBLKAF	100	100	89	78	112	81	98	0
02	E0075	213 *	140 *	108	166	174 *	141	132 *	5
03	E0074	223 *	147 *	81	143	182 *	113	93	6
04	E0083	198 *	140 *	97	118	158 *	100	95	4
05	E0076	164 *	130 *	84	92	118	80	94	3
06	VBLKAH	101	102	87	74	78	78	97	0
07	E0077	149 *	139 *	91	94	75	68	95	3
08	E0078	114	111	83	82	76	74	96	0
09	E0079	137 *	131 *	85	101	265 *	86	124	4
10	E0075RE	185 *	149 *	102	120	199 *	127	142 *	5
11	E0076RE	128 *	114	85	78	86	63	79	2
12	E0082	112	103	83	72	85	77	90	0
13	E0074MS	215 *	143 *	80	118	138	118	111	4
14	E0074MSD	183 *	144 *	88	104	115	88	103	3
15	E0077RE	130 *	119	86	77	83	64	87	2
16	E0079RE	176 *	143 *	91	97	84	97	124	3
17	VHBLK01	96	97	89	79	93	86	100	0
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

QC LIMITS

VDMC8 (DPA) = 1,2-Dichloropropane-d6 (74-124)  
VDMC9 (TOL) = Toluene-d8 (78-121)  
VDMC10 (TDP) = trans-1,3-Dichloropropene-d4 (72-130)  
VDMC11 (HEX) = 2-Hexanone-d5 (17-184)  
VDMC12 (DXE) = 1,4-Dioxane-d8 (50-150)  
VDMC13 (TCA) = 1,1,2,2-Tetrachloroethane-d (56-161)  
VDMC14 (DCZ) = 1,2-Dichlorobenzene-d4 (70-131)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

3B - FORM III VOA-2  
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Matrix Spike - EPA Sample No.: E0074

Level: (LOW/MED)

LOW

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENTRATION (ug/kg)	MS CONCENTRATION (ug/kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	56	0	48	86	59-172
Trichloroethene	56	3.5	81	138 *	62-137
Benzene	56	0	110	196 *	66-142
Toluene	56	0	86	154 *	59-139
Chlorobenzene	56	0	59	105	60-133

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENTRATION (ug/kg)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
1,1-Dichloroethene	59	50	85	1	0-22	59-172
Trichloroethene	59	91	148 *	7	0-24	62-137
Benzene	59	110	186 *	5	0-21	66-142
Toluene	59	99	168 *	9	0-21	59-139
Chlorobenzene	59	77	131	22 *	0-21	60-133

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 1 out of 5 outside limits

Spike Recovery: 6 out of 10 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

00012



4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBKAF

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Lab File ID: A13724

Lab Sample ID: VBKAF

Instrument ID: A-5973

Matrix: (SOIL/SED/WATER) SOIL

Date Analyzed: 05/03/2008

Level: (TRACE or LOW/MED LOW)

Time Analyzed: 1033

GC Column: RTX-VMS ID: 0.25 (mm)

Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0075	S-0878.04	A13732	1448
02	E0074	S-0878.03	A13736	1656
03	E0083	S-0878.10	A13738	1800
04	E0076	S-0878.05	A13739	1831
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COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKAH

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Lab File ID: A13743

Lab Sample ID: VBLKAH

Instrument ID: A-5973

Matrix: (SOIL/SED/WATER) SOIL

Date Analyzed: 05/04/2008

Level: (TRACE or LOW/MED LOW)

Time Analyzed: 1020

GC Column: RTX-VMS ID: 0.25 (mm)

Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0077	S-0878.06	A13744	1054
02	E0078	S-0878.07	A13745	1126
03	E0079	S-0878.08	A13746	1158
04	E0075RE	S-0878.04RE	A13748	1303
05	E0076RE	S-0878.05RE	A13749	1336
06	E0082	S-0878.09	A13750	1408
07	E0074MS	S-0878.03MS	A13752	1512
08	E0074MSD	S-0878.03MSD	A13753	1544
09	E0077RE	S-0878.06RE	A13754	1616
10	E0079RE	S-0878.08RE	A13755	1648
11	VHBLK01	S-0878.11	A13758	1824
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COMMENTS:

## 8A - FORM VIII VOA

## VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

GC Column: RTX-VMSID: 0.25 (mm) Init. Calib. Date(s): 05/01/2008 05/01/2008

EPA Sample No. (VSTD#####): VSTD050AF

Date Analyzed: 05/03/2008

Lab File ID (Standard): A13723

Time Analyzed: 1001

Instrument ID: A-5973

Heated Purge: (Y/N) Y

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	7674560	13.11	9114510	8.53	3815445	17.19
UPPER LIMIT	15349120	13.61	18229020	9.03	7630890	17.69
LOWER LIMIT	3837280	12.61	4557255	8.03	1907722	16.69
EPA SAMPLE No.						
01 VSTD050AF	7674560	13.11	9114510	8.53	3815445	17.19
02 VBLKAF	9121349	13.11	10557883	8.53	4368532	17.19
03 E0075	4089511	13.11	8587668	8.54	624202*	17.19
04 E0074	3240456*	13.11	7462990	8.54	602053*	17.19
05 E0083	4439457	13.11	9239204	8.54	735516*	17.19
06 E0076	5624168	13.11	10560412	8.54	1007599*	17.19
07 VSTD050AG	8290143	13.11	9434408	8.53	4294684	17.19
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IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8A - FORM VIII VOA

## VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.:

SDG No.: E0074

GC Column: RTX-VMS ID: 0.25 (mm) Init. Calib. Date(s): 05/01/2008 05/01/2008

EPA Sample No. (VSTD#####): VSTD050AH

Date Analyzed: 05/04/2008

Lab File ID (Standard): A13742

Time Analyzed: 0948

Instrument ID: A-5973

Heated Purge: (Y/N) Y

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	8014290	13.10	9541862	8.52	3846057	17.18
UPPER LIMIT	16028580	13.60	19083724	9.02	7692114	17.68
LOWER LIMIT	4007145	12.60	4770931	8.02	1923028	16.68
EPA SAMPLE No.						
01 VSTD050AH	8014290	13.10	9541862	8.52	3846057	17.18
02 VBLKAH	9800454	13.10	11336417	8.52	4770726	17.18
03 E0077	5340440	13.10	9096813	8.53	1149910*	17.18
04 E0078	7407171	13.10	10003441	8.53	2167083	17.18
05 E0079	5955445	13.10	9272891	8.53	1670528*	17.18
06 E0075RE	4940969	13.10	9187205	8.53	957708*	17.18
07 E0076RE	6940264	13.10	11409526	8.53	1521129*	17.18
08 E0082	8778496	13.11	12338628	8.53	2640361	17.18
09 E0074MS	3440601*	13.11	7804026	8.53	418306*	17.19
10 E0074MSD	4336323	13.11	9063683	8.53	632874*	17.19
11 E0077RE	6814131	13.11	11058068	8.54	1503160*	17.19
12 E0079RE	4527615	13.11	9206798	8.54	716535*	17.19
13 VHBLK01	8294414	13.11	9263843	8.53	4063227	17.19
14 VSTD050AI	6308714	13.11	7485451	8.53	3135272	17.19
15						
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22						

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 2J - FORM II SV-3

## SOIL SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	SDMC1 (PHL) #	SDMC2 (BCE) #	SDMC3 (2CP) #	SDMC4 (4MP) #	SDMC5 (NBZ) #	SDMC6 (2NP) #	SDMC7 (DCP) #	SDMC8 (4CA) #
01	SBLK72	75	68	75	68	71	73	70	68
02	E0075	69	63	71	58	67	70	70	54
03	E0078	67	62	70	60	67	72	71	64
04	E0074	68	63	71	59	67	73	72	60
05	E0077	67	61	70	55	65	71	70	52
06	E0079	69	62	72	60	68	74	74	55
07	E0082	66	60	69	57	65	69	69	2
08	E0083	62	57	66	50	63	68	65	48
09	E0074MS	60	55	65	58	59	65	65	53
10	E0074MSD	62	57	66	60	62	68	70	57
11	E0076	67	60	70	55	66	70	68	3
12	E0078DL	68	65	71	56	68	72	70	62
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## QC LIMITS

SDMC1 (PHL) = Phenol-d5	(17-103)
SDMC2 (BCE) = Bis-(2-chloroethyl) ether-d8	(12-98)
SDMC3 (2CP) = 2-Chlorophenol-d4	(13-101)
SDMC4 (4MP) = 4-Methylphenol-d8	(8-100)
SDMC5 (NBZ) = Nitrobenzene-d5	(16-103)
SDMC6 (2NP) = 2-Nitrophenol-d4	(16-104)
SDMC7 (DCP) = 2,4-Dichlorophenol-d3	(23-104)
SDMC8 (4CA) = 4-Chloroaniline-d4	(1-145)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D DMC diluted out

2K - FORM II SV-4  
SOIL SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	SDMC9 (DMP) #	SDMC10 (ACY) #	SDMC11 (4NP) #	SDMC12 (FLR) #	SDMC13 (NMP) #	SDMC14 (ANC) #	SDMC15 (PYR) #	SDMC16 (BAP) #	TOT OUT
01	SBLK72	72	71	68	72	55	71	68	64	0
02	E0075	67	69	74	68	49	68	70	61	0
03	E0078	69	69	79	69	56	70	67	40 *	1
04	E0074	69	69	85	68	63	68	71	66	0
05	E0077	69	69	83	69	56	67	67	66	0
06	E0079	72	72	91	73	60	72	74	70	0
07	E0082	68	69	81	69	57	67	68	65	0
08	E0083	64	65	76	66	51	64	67	63	0
09	E0074MS	67	68	82	69	63	68	74	70	0
10	E0074MSD	71	71	90	73	73	74	77	74	0
11	E0076	68	69	84	69	54	68	67	65	0
12	E0078DL	73	73	70	74	37	79	77	76	0
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SDMC9 (DMP) = Dimethylphthalate-d6  
SDMC10 (ACY) = Acenaphthylene-d8  
SDMC11 (4NP) = 4-Nitrophenol-d4  
SDMC12 (FLR) = Fluorene-d10  
SDMC13 (NMP) = 4,6-Dinitro-2-methylphenol-d2  
SDMC14 (ANC) = Anthracene-d10  
SDMC15 (PYR) = Pyrene-d10  
SDMC16 (BAP) = Benzo(a)pyrene-d12

QC LIMITS

(43-111)  
(20-97)  
(16-166)  
(40-108)  
(1-121)  
(22-98)  
(51-120)  
(43-111)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D DMC diluted out



3D - FORM III SV-2  
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Matrix Spike - EPA Sample No.: E0074

Level: (LOW/MED) LOW

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENTRATION (ug/kg)	MS CONCENTRATION (ug/kg)	MS % REC #	QC LIMITS REC.
Phenol	1556	0	930	60	26-90
2-Chlorophenol	1556	0	880	57	25-102
N-Nitroso-di-n-propylamine	1556	0	890	57	41-126
4-Chloro-3-methylphenol	1556	0	1000	64	26-103
Acenaphthene	1556	0	970	62	31-137
4-Nitrophenol	1556	0	1200	77	11-114
2,4-Dinitrotoluene	1556	0	1000	64	28-89
Pentachlorophenol	1556	0	1400	90	17-109
Pyrene	1556	0	1100	71	35-142

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENTRATION (ug/kg)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Phenol	1545	940	61	2	0-35	26-90
2-Chlorophenol	1545	880	57	0	0-50	25-102
N-Nitroso-di-n-propylamine	1545	900	58	2	0-38	41-126
4-Chloro-3-methylphenol	1545	1100	71	10	0-33	26-103
Acenaphthene	1545	1000	65	5	0-19	31-137
4-Nitrophenol	1545	1400	91	17	0-50	11-114
2,4-Dinitrotoluene	1545	1100	71	10	0-47	28-89
Pentachlorophenol	1545	1600	104	14	0-47	17-109
Pyrene	1545	1100	71	0	0-36	35-142

# Column to be used to flag recovery and RPD values with an asterisk-----

\* Values outside of QC limits

RPD: 0 out of 9 outside limits

Spike Recovery: 0 out of 18 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

00322

4C - FORM IV SV  
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK72

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Lab File ID: G0119

Lab Sample ID: SBLK72

Instrument ID: G-5973

Date Extracted 05/01/2008

Matrix: (SOIL/SED/WATER) SOIL

Date Analyzed: 05/13/2008

Level: (LOW/MED) LOW

Time Analyzed: 1655

Extraction: (Type) SONC

GPC Cleanup: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	E0075	S-0878.04	G0120	05/13/2008
02	E0078	S-0878.07	G0121	05/13/2008
03	E0074	S-0878.03	G0123	05/13/2008
04	E0077	S-0878.06	G0125	05/13/2008
05	E0079	S-0878.08	G0126	05/13/2008
06	E0082	S-0878.09	G0132	05/13/2008
07	E0083	S-0878.10	G0133	05/14/2008
08	E0074MS	S-0878.03MS	G0134	05/14/2008
09	E0074MSD	S-0878.03MSD	G0135	05/14/2008
10	E0076	S-0878.05	G0136	05/14/2008
11	E0078DL	S-0878.07DL	G0137	05/14/2008
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COMMENTS: \_\_\_\_\_

## 8C - FORM VIII SV-1

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

GC Column: RTX-5MS ID: 0.25 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008

EPA Sample No. (SSTD020##): SSTD02051

Date Analyzed: 05/13/2008

Lab File ID (Standard): G0117

Time Analyzed: 1540

Instrument ID: F-5973

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1998861	5.63	8547856	8.38	5026600	12.29
UPPER LIMIT	3997722	6.13	17095712	8.88	10053200	12.79
LOWER LIMIT	999430	5.13	4273928	7.88	2513300	11.79
EPA SAMPLE NO.						
01 SBLK72	1928486	5.63	8424999	8.38	5124083	12.29
02 E0075	1770286	5.63	7747554	8.38	4748902	12.29
03 E0078	2103750	5.63	9445011	8.38	5788382	12.29
04 E0074	2325999	5.63	10199565	8.39	6320219	12.29
05 E0077	1988174	5.63	8695376	8.38	5425998	12.29
06 E0079	2229753	5.63	9799484	8.38	5997258	12.29
07 SSTD02052	1929507	5.63	8276722	8.38	4912512	12.29
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22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (DCB) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8D - FORM VIII SV-2

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

EPA Sample No. (SSTD020##): SSTD02051

Date Analyzed: 05/13/2008

Lab File ID (Standard): G0117

Time Analyzed: 1540

Instrument ID: F-5973

GC Column: RTX-5MS

ID: 0.25 (mm)

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	8530852	14.33	7947541	17.16	7475339	18.98
UPPER LIMIT	17061704	14.83	15895082	17.66	14950678	19.48
LOWER LIMIT	4265426	13.83	3973770	16.66	3737669	18.48
EPA SAMPLE NO.						
01 SBLK72	8840992	14.32	9115454	17.16	9271638	18.97
02 E0075	7888010	14.33	7569500	17.16	8061388	18.99
03 E0078	9638488	14.33	9435960	17.18	13106091	18.92
04 E0074	10565219	14.33	9874505	17.16	10148429	18.99
05 E0077	9329750	14.33	9274350	17.16	9874226	18.99
06 E0079	10169443	14.33	9755221	17.16	10340630	18.99
07 SSTD02052	8355173	14.33	7854288	17.16	8059433	18.98
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IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8C - FORM VIII SV-1

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

GC Column: RTX-5MS ID: 0.25 (mm) Init. Calib. Date(s): 05/13/2008 05/13/2008

EPA Sample No. (SSTD020##): SSTD02053

Date Analyzed: 05/13/2008

Lab File ID (Standard): G0131

Time Analyzed: 2324

Instrument ID: F-5973

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1736067	5.63	7268313	8.38	4506764	12.29
UPPER LIMIT	3472134	6.13	14536626	8.88	9013528	12.79
LOWER LIMIT	868033	5.13	3634156	7.88	2253382	11.79
EPA SAMPLE NO.						
01 E0082	2029537	5.63	8864292	8.38	5604612	12.29
02 E0083	1985304	5.63	8362554	8.38	5200440	12.29
03 E0074MS	1912398	5.63	8420979	8.38	5205642	12.29
04 E0074MSD	2130160	5.63	9116696	8.38	5577879	12.29
05 E0076	1765066	5.63	7408508	8.38	4641661	12.29
06 E0078DL	2305341	5.63	9841550	8.38	6152322	12.29
07 SSTD02054	2105528	5.63	9007968	8.38	5358793	12.29
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (DCB) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8D - FORM VIII SV-2

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

EPA Sample No. (SSTD020##): SSTD02053

Date Analyzed: 05/13/2008

Lab File ID (Standard): G0131

Time Analyzed: 2324

Instrument ID: F-5973

GC Column: RTX-5MS

ID: 0.25

(mm)

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	7691264	14.32	7607219	17.16	7826285	18.98
UPPER LIMIT	15382528	14.82	15214438	17.66	15652570	19.48
LOWER LIMIT	3845632	13.82	3803609	16.66	3913142	18.48
EPA SAMPLE NO.						
01 E0082	9752257	14.32	9460354	17.16	9732310	18.98
02 E0083	8895331	14.32	8570417	17.16	8762526	18.98
03 E0074MS	9034779	14.33	8391792	17.16	8540224	18.98
04 E0074MSD	9559015	14.33	9247064	17.16	9620233	18.98
05 E0076	8120646	14.33	8193682	17.16	8521902	18.98
06 E0078DL	10437632	14.33	9882299	17.16	9954731	18.99
07 SSTD02054	9018368	14.33	8739601	17.16	8916469	18.98
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.



## 2P - Form II PEST-2

## SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2) RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK64	99	92	120	106			0
02	PLCS64	112	108	133	122			0
03	E0075	109	103	127	107			0
04	E0077	105	118	133	138			0
05	E0078	68	74	89	84			0
06	E0079	104	103	129	125			0
07	E0082	129	116	160 *	137			1
08	E0083	127	137	168 *	152 *			2
09	E0078DL	79	81	146	94			0
10	E0074	64	84	84	103			0
11	E0074MS	76	83	109	117			0
12	E0074MSD	76	80	108	110			0
13	E0076	112	106	142	126			0
14	E0082DL	240 D	244 D	381 D	291 D			4
15	E0083DL	130	138	193 D	168 D			2
16	E0078DL2	59	60	153 D	67			1
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

TCX = Tetrachloro-m-xylene  
DCB = Decachlorobiphenyl

QC LIMITS  
(30-150)  
(30-150)

# Column to be used to flag recovery values  
\* Values outside of contract required QC limits  
D Surrogate diluted out

3H - FORM III PEST-2  
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Matrix Spike - EPA Sample No.: E0074

Instrument ID: A-6890A

GC Column: RTX-CLP2 ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	19.4	0	13.6	70	46-127
Heptachlor	19.4	0	12.1	62	35-130
Aldrin	19.4	0	13.3	69	34-132
Dieldrin	38.9	0	26.4	68	31-134
Endrin	38.9	0	27.2	70	42-139
4,4'-DDT	38.9	3.50	27.3	61	23-134

COMPOUND	SPIKE ADDED ug/Kg	MSD CONCENTRATION ug/Kg	MSD % REC #	%	QC LIMITS	
					RPD	REC.
gamma-BHC (Lindane)	19.4	11.7	60	15	50	46-127
Heptachlor	19.4	10.8	56	10	31	35-130
Aldrin	19.4	11.5	59	16	43	34-132
Dieldrin	38.9	23.3	60	12	38	31-134
Endrin	38.9	23.5	60	15	45	42-139
4,4'-DDT	38.9	23.3	51	18	50	23-134

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 6 outside limits

Spike Recovery: 0 out of 12 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

00844

3H - FORM III PEST-2  
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Matrix Spike - EPA Sample No.: E0074

Instrument ID: A-6890B

GC Column: RTX-CLP ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	19.4	0	15.0	77	46-127
Heptachlor	19.4	0	13.6	70	35-130
Aldrin	19.4	0	13.8	71	34-132
Dieldrin	38.9	0	27.1	70	31-134
Endrin	38.9	0	31.5	81	42-139
4,4'-DDT	38.9	3.65	24.2	53	23-134

COMPOUND	SPIKE ADDED ug/Kg	MSD CONCENTRATION ug/Kg	MSD % REC #	%	QC LIMITS	
					RPD	REC.
gamma-BHC (Lindane)	19.4	12.3	63	20	50	46-127
Heptachlor	19.4	11.3	58	19	31	35-130
Aldrin	19.4	11.4	59	18	43	34-132
Dieldrin	38.9	22.9	59	17	38	31-134
Endrin	38.9	26.5	68	17	45	42-139
4,4'-DDT	38.9	21.1	45	16	50	23-134

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 6 outside limits

Spike Recovery: 0 out of 12 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

00845

3M - FORM III PEST-4  
SOIL PESTICIDE LABORATORY CONTROL  
SAMPLE RECOVERY

EPA SAMPLE NO.  
PLCS64

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074

Lab Sample ID: PLCS64

LCS Lot No.: A031346

Date Extracted 04/30/2008

Date Analyzed (1): 05/13/2008

Instrument ID (1): A-6890A

GC Column (1): RTX-CLP2 ID: 0.53 (mm)

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
gamma-BHC (Lindane)	1.67	1.57	94	50-120
Heptachlor epoxide	1.67	1.65	99	50-150
Dieldrin	3.33	3.45	104	30-130
4,4'-DDE	3.33	3.21	96	50-150
Endrin	3.33	3.64	109	50-120
Endosulfan sulfate	3.33	3.25	98	50-120
gamma-Chlordane	1.67	1.82	109	30-130

Instrument ID (2): A-6890B

GC Column (2): RTX-CLP ID: 0.53 (mm)

Date Analyzed (2): 05/13/2008

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
gamma-BHC (Lindane)	1.67	1.51	90	50-120
Heptachlor epoxide	1.67	1.67	100	50-150
Dieldrin	3.33	3.20	96	30-130
4,4'-DDE	3.33	3.72	112	50-150
Endrin	3.33	3.44	103	50-120
Endosulfan sulfate	3.33	2.87	86	50-120
gamma-Chlordane	1.67	2.04	122	30-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

LCS Recovery: 0 out of 14 outside limits

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

SOM01.1 (5/2005)

00846

4E - FORM IV PEST  
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK64

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
Lab Sample ID: PBLK64 Lab File ID: A10398  
Matrix: (SOIL/SED/WATER) SOIL Extraction: (Type) SONC Date Extracted: 04/30/2008  
Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) Y  
Date Analyzed (1): 05/13/2008 Date Analyzed (2): 05/13/2008  
Time Analyzed (1): 2053 Time Analyzed (2): 2130  
Instrument ID (1): A-6890A Instrument ID (2): A-6890B  
GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2): RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED (1)	DATE ANALYZED (2)
01	PLCS64	PLCS64	05/13/2008	05/13/2008
02	E0075	S-0878.04	05/14/2008	05/14/2008
03	E0077	S-0878.06	05/14/2008	05/14/2008
04	E0078	S-0878.07	05/14/2008	05/14/2008
05	E0079	S-0878.08	05/14/2008	05/14/2008
06	E0082	S-0878.09	05/14/2008	05/14/2008
07	E0083	S-0878.10	05/14/2008	05/14/2008
08	E0078DL	S-0878.07DL1	05/14/2008	05/14/2008
09	E0074	S-0878.03	05/14/2008	05/14/2008
10	E0074MS	S-0878.03MS	05/14/2008	05/14/2008
11	E0074MSD	S-0878.03MSD	05/14/2008	05/14/2008
12	E0076	S-0878.05	05/14/2008	05/14/2008
13	E0082DL	S-0878.09DL	05/14/2008	05/14/2008
14	E0083DL	S-0878.10DL	05/14/2008	05/14/2008
15	E0078DL2	S-0878.07DL2	05/14/2008	05/14/2008
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: \_\_\_\_\_

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 10.70			DCB: 25.64		
	EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #
01	RESC11	A10321	5/11/2008	12:23	10.7
02	PEM11	A10322	5/11/2008	13:00	10.7
03	TOXAPH111	A10323	5/11/2008	13:37	10.7
04	TOXAPH211	A10324	5/11/2008	14:14	10.7
05	TOXAPH311	A10325	5/11/2008	14:51	10.7
06	TOXAPH411	A10326	5/11/2008	15:27	10.7
07	TOXAPH511	A10327	5/11/2008	16:04	10.7
08	INDC111	A10328	5/11/2008	16:41	10.7
09	INDC211	A10329	5/11/2008	17:18	10.7
10	INDC311	A10330	5/11/2008	17:55	10.7
11	INDC411	A10331	5/11/2008	18:32	10.7
12	INDC511	A10332	5/11/2008	19:09	10.7
13	PIBLK11	A10333	5/11/2008	19:46	10.7
14	PEM21	A10334	5/11/2008	20:22	10.7
15	PIBLK81	A10394	5/13/2008	18:26	10.71
16	PEM61	A10395	5/13/2008	19:03	10.71
17	GPCBLK64	A10396	5/13/2008	19:39	0 *
18	GPCPEST64	A10397	5/13/2008	20:16	0 *
19	PBLK64	A10398	5/13/2008	20:53	10.7
20	PLCS64	A10399	5/13/2008	21:30	10.7
21	ZZZZZ	A10400	5/13/2008	22:05	10.7
22	PIBLK91	A10401	5/13/2008	22:42	10.7
23	ZZZZZ	A10402	5/13/2008	23:19	10.7
24	INDC371	A10403	5/13/2008	23:56	10.7
25	ZZZZZ	A10404	5/14/2008	00:33	10.7
26	ZZZZZ	A10405	5/14/2008	01:10	10.7
27	ZZZZZ	A10406	5/14/2008	01:46	10.7
28	ZZZZZ	A10407	5/14/2008	02:23	10.7
29	ZZZZZ	A10408	5/14/2008	03:00	10.7
30	E0075	A10409	5/14/2008	03:37	10.7
31	ZZZZZ	A10410	5/14/2008	04:14	10.7
32	E0077	A10411	5/14/2008	04:50	10.71

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)  
DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.



8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
EPA SAMPLE NO.		LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #
					DCB RT #
01	RESC12	A10321	5/11/2008	13:00	9.96
02	PEM12	A10322	5/11/2008	13:37	9.96
03	TOXAPH112	A10323	5/11/2008	14:14	9.96
04	TOXAPH212	A10324	5/11/2008	14:51	9.96
05	TOXAPH312	A10325	5/11/2008	15:27	9.96
06	TOXAPH412	A10326	5/11/2008	16:04	9.96
07	TOXAPH512	A10327	5/11/2008	16:41	9.96
08	INDC112	A10328	5/11/2008	17:18	9.96
09	INDC212	A10329	5/11/2008	17:55	9.96
10	INDC312	A10330	5/11/2008	18:32	9.96
11	INDC412	A10331	5/11/2008	19:09	9.96
12	INDC512	A10332	5/11/2008	19:46	9.96
13	PIBLK12	A10333	5/11/2008	20:22	9.96
14	PEM22	A10334	5/11/2008	20:59	9.96
15	PIBLK82	A10394	5/13/2008	19:03	9.97
16	PEM62	A10395	5/13/2008	19:39	9.96
17	GPCBLK64	A10396	5/13/2008	20:16	0 *
18	GPCPEST64	A10397	5/13/2008	20:53	0 *
19	PBLK64	A10398	5/13/2008	21:30	9.97
20	PLCS64	A10399	5/13/2008	22:05	9.96
21	ZZZZZ	A10400	5/13/2008	22:42	9.96
22	PIBLK92	A10401	5/13/2008	23:19	9.96
23	ZZZZZ	A10402	5/13/2008	23:56	9.96
24	INDC372	A10403	5/14/2008	00:33	9.96
25	ZZZZZ	A10404	5/14/2008	01:10	9.97
26	ZZZZZ	A10405	5/14/2008	01:46	9.97
27	ZZZZZ	A10406	5/14/2008	02:23	9.97
28	ZZZZZ	A10407	5/14/2008	03:00	9.96
29	ZZZZZ	A10408	5/14/2008	03:37	9.96
30	E0075	A10409	5/14/2008	04:14	9.96
31	ZZZZZ	A10410	5/14/2008	04:50	9.97
32	E0077	A10411	5/14/2008	05:27	9.96

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)  
DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 10.70			DCB: 25.64		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 E0078	A10412	5/14/2008	05:27	10.71	25.65
02 E0079	A10413	5/14/2008	06:04	10.7	25.65
03 E0082	A10414	5/14/2008	06:41	10.7	25.65
04 E0083	A10415	5/14/2008	07:18	10.7	25.65
05 E0078DL	A10416	5/14/2008	07:55	10.7	25.65
06 PIBLKA1	A10417	5/14/2008	08:32	10.71	25.65
07 PEM71	A10418	5/14/2008	09:08	10.7	25.65
08 ZZZZZ	A10419	5/14/2008	09:45	10.71	25.65
09 ZZZZZ	A10420	5/14/2008	10:22	10.7	25.65
10 E0074	A10421	5/14/2008	10:59	10.7	25.65
11 E0074MS	A10422	5/14/2008	11:36	10.7	25.65
12 E0074MSD	A10423	5/14/2008	12:13	10.7	25.65
13 E0076	A10424	5/14/2008	12:49	10.7	25.65
14 E0082DL	A10425	5/14/2008	13:26	10.7	25.65
15 E0083DL	A10426	5/14/2008	14:03	10.7	25.65
16 E0078DL2	A10427	5/14/2008	14:40	10.7	25.65
17 ZZZZZ	A10428	5/14/2008	15:17	10.7	25.65
18 PIBLKB1	A10429	5/14/2008	15:54	10.7	25.64
19 INDC81	A10430	5/14/2008	16:31	10.7	25.65
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)  
# Column used to flag RT values with an asterisk.

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.96		DCB: 23.45			
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 E0078	A10412	5/14/2008	06:04	9.97	23.46
02 E0079	A10413	5/14/2008	06:41	9.97	23.46
03 E0082	A10414	5/14/2008	07:18	9.96	23.46
04 E0083	A10415	5/14/2008	07:55	9.97	23.46
05 E0078DL	A10416	5/14/2008	08:32	9.97	23.46
06 PIBLKA2	A10417	5/14/2008	09:08	9.96	23.46
07 PEM72	A10418	5/14/2008	09:45	9.97	23.46
08 ZZZZZ	A10419	5/14/2008	10:22	9.96	23.46
09 ZZZZZ	A10420	5/14/2008	10:59	9.96	23.46
10 E0074	A10421	5/14/2008	11:36	9.96	23.46
11 E0074MS	A10422	5/14/2008	12:13	9.96	23.46
12 E0074MSD	A10423	5/14/2008	12:49	9.96	23.45
13 E0076	A10424	5/14/2008	13:26	9.96	23.45
14 E0082DL	A10425	5/14/2008	14:03	9.96	23.46
15 E0083DL	A10426	5/14/2008	14:40	9.96	23.46
16 E0078DL2	A10427	5/14/2008	15:17	9.96	23.45
17 ZZZZZ	A10428	5/14/2008	15:54	9.96	23.45
18 PIBLKB2	A10429	5/14/2008	16:31	9.96	23.46
19 INDC82	A10430	5/14/2008	17:08	9.96	23.46
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

1G - FORM I PEST  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PLCS64(1)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: PLCS64

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: A10399

% Moisture: 0

Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SONC

Date Extracted: 04/30/2008

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/13/2008

Injection Volume: 1.0

(uL) GPC Factor: 2.0

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.6	J
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.6	J
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.4	
72-55-9	4,4'-DDE	3.2	J
72-20-8	Endrin	3.6	
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	J
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.8	
8001-35-2	Toxaphene	170	U

SOM01.2 (6/2007)

01006

1G - FORM I PEST  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PLCS64(2)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: PLCS64

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: A10399

% Moisture: 0

Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SONC

Date Extracted: 04/30/2008

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 05/13/2008

Injection Volume: 1.0

(uL) GPC Factor: 2.0

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.5	J
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.7	
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.2	J
72-55-9	4,4'-DDE	3.7	
72-20-8	Endrin	3.4	
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	2.9	J
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	2.0	
8001-35-2	Toxaphene	170	U

SOM01.2 (6/2007)

01007

## 2R - Form II ARO-2

## SOIL AROCLOR SURROGATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2) RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	ABLK63	84	83	79	74			0
02	ALCS63	101	111	96	116			0
03	E0074	96	107	90	109			0
04	E0074MS	70	77	68	77			0
05	E0074MSD	94	96	96	94			0
06	E0075	70	65	70	57			0
07	E0076	110	107	102	101			0
08	E0077	89	95	87	96			0
09	E0078	67	61	69	59			0
10	E0079	70	70	76	74			0
11	E0082	70	67	77	60			0
12	E0083	88	77	90	76			0
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

TCX = Tetrachloro-m-xylene  
 DCB = Decachlorobiphenyl

QC LIMITS  
 (30-150)  
 (30-150)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits  
 D Surrogate diluted out



3K - FORM III ARO-2  
SOIL AROCLOR MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074

Matrix Spike - EPA Sample No.: E0074

Instrument ID: P-6890A

GC Column: RTX-CLP2 ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC #	QC LIMITS REC.
Aroclor-1016	155	0	110	71	29-135
Aroclor-1260	155	20.2	117	62	29-135

COMPOUND	SPIKE ADDED ug/Kg	MSD CONCENTRATION ug/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Aroclor-1016	155	133	86	19 *	15	29-135
Aroclor-1260	155	146	81	27 *	20	29-135

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 2 out of 2 outside limits

Spike Recovery: 0 out of 4 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

3K - FORM III ARO-2  
SOIL AROCLOR MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Matrix Spike - EPA Sample No.: E0074

Instrument ID: P-6890B

GC Column: RTX-CLP ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC #	QC LIMITS REC.
Aroclor-1016	155	0	122	79	29-135
Aroclor-1260	155	38.8	146	69	29-135

COMPOUND	SPIKE ADDED ug/Kg	MSD CONCENTRATION ug/Kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Aroclor-1016	155	149	96	19 *	15	29-135
Aroclor-1260	155	151	72	4	20	29-135

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 1 out of 2 outside limits

Spike Recovery: 0 out of 4 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

01055

3P - FORM III ARO-4  
SOIL AROCLOR LABORATORY CONTROL  
SAMPLE RECOVERY

EPA SAMPLE NO.  
ALCS63

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074

Lab Sample ID: ALCS63

LCS Lot No.: A031346

Date Extracted 04/29/2008

Date Analyzed (1): 05/11/2008

Instrument ID (1): P-6890A

GC Column (1): RTX-CLP2 ID: 0.53 (mm)

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
Aroclor-1016	33.3	38.5	116	50-150
Aroclor-1260	33.3	38.2	115	50-150

Instrument ID (2): P-6890B

GC Column (2): RTX-CLP ID: 0.53 (mm)

Date Analyzed (2): 05/11/2008

COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% REC #	QC LIMITS
Aroclor-1016	33.3	45.8	138	50-150
Aroclor-1260	33.3	45.8	138	50-150

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

LCS Recovery: 0 out of 4 outside limits

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

SOM01.1 (5/2005)

01057

4F - FORM IV ARO  
AROCOR METHOD BLANK SUMMARY

EPA SAMPLE NO.  
ABLK63

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
Lab Sample ID: ABLK63 Lab File ID: P17697  
Matrix: (SOIL/SED/WATER) SOIL Extraction: (Type) SONC Date Extracted: 04/29/2008  
Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) N  
Acid Cleanup: (Y/N) Y  
Date Analyzed (1): 05/11/2008 Date Analyzed (2): 05/11/2008  
Time Analyzed (1): 0230 Time Analyzed (2): 0306  
Instrument ID (1): P-6890A Instrument ID (2): P-6890B  
GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2): RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED (1)	DATE ANALYZED (2)
01	ALCS63	ALCS63	05/11/2008	05/11/2008
02	E0074	S-0878.03	05/11/2008	05/11/2008
03	E0074MS	S-0878.03MS	05/11/2008	05/11/2008
04	E0074MSD	S-0878.03MSD	05/11/2008	05/11/2008
05	E0075	S-0878.04	05/11/2008	05/11/2008
06	E0076	S-0878.05	05/11/2008	05/11/2008
07	E0077	S-0878.06	05/11/2008	05/11/2008
08	E0078	S-0878.07	05/11/2008	05/11/2008
09	E0079	S-0878.08	05/11/2008	05/11/2008
10	E0082	S-0878.09	05/11/2008	05/11/2008
11	E0083	S-0878.10	05/11/2008	05/11/2008
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: \_\_\_\_\_

8H - FORM VIII ARO  
AROCOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/10/2008 05/11/2008  
Instrument ID: P-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 8.07			DCB: 21.51		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	AR1660111	P17681	5/10/2008	16:44	8.07
02	AR1660211	P17682	5/10/2008	17:21	8.07
03	AR1660311	P17683	5/10/2008	17:58	8.07
04	AR1660411	P17684	5/10/2008	18:34	8.07
05	AR1660511	P17685	5/10/2008	19:11	8.07
06	AR1221311	P17686	5/10/2008	19:48	8.07
07	AR1232311	P17687	5/10/2008	20:24	8.07
08	AR1242311	P17688	5/10/2008	21:01	8.07
09	AR1248311	P17689	5/10/2008	21:37	8.07
10	AR1254311	P17690	5/10/2008	22:14	8.07
11	AR1262311	P17691	5/10/2008	22:50	8.07
12	AR1268311	P17692	5/10/2008	23:27	8.07
13	AIBLK11	P17693	5/11/2008	00:03	8.07
14	AIBLK21	P17695	5/11/2008	01:16	8.07
15	ABLK63	P17697	5/11/2008	02:30	8.07
16	ALCS63	P17698	5/11/2008	03:06	8.07
17	ZZZZZ	P17699	5/11/2008	03:43	8.07
18	ZZZZZ	P17700	5/11/2008	04:19	8.07
19	E0074	P17701	5/11/2008	04:56	8.07
20	E0074MS	P17702	5/11/2008	05:32	8.07
21	E0074MSD	P17703	5/11/2008	06:09	8.07
22	E0075	P17704	5/11/2008	06:45	8.07
23	E0076	P17705	5/11/2008	07:22	8.07
24	E0077	P17706	5/11/2008	07:59	8.07
25	E0078	P17707	5/11/2008	08:35	8.07
26	E0079	P17708	5/11/2008	09:12	8.07
27	E0082	P17709	5/11/2008	09:48	8.07
28	E0083	P17710	5/11/2008	10:25	8.07
29	AIBLK31	P17711	5/11/2008	11:01	8.06
30	AR1660331	P17712	5/11/2008	11:38	8.06
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)  
DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8H - FORM VIII ARO  
AROCLOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/10/2008 05/11/2008  
Instrument ID: P-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.02			DCB: 21.86		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 AR1660112	P17681	5/10/2008	17:21	9.03	21.87
02 AR1660212	P17682	5/10/2008	17:58	9.03	21.86
03 AR1660312	P17683	5/10/2008	18:34	9.02	21.86
04 AR1660412	P17684	5/10/2008	19:11	9.02	21.86
05 AR1660512	P17685	5/10/2008	19:48	9.02	21.86
06 AR1221312	P17686	5/10/2008	20:24	9.02	21.86
07 AR1232312	P17687	5/10/2008	21:01	9.02	21.86
08 AR1242312	P17688	5/10/2008	21:37	9.02	21.86
09 AR1248312	P17689	5/10/2008	22:14	9.02	21.86
10 AR1254312	P17690	5/10/2008	22:50	9.02	21.86
11 AR1262312	P17691	5/10/2008	23:27	9.03	21.87
12 AR1268312	P17692	5/11/2008	00:03	9.02	21.86
13 AIBLK12	P17693	5/11/2008	00:40	9.02	21.87
14 AIBLK22	P17695	5/11/2008	01:53	9.03	21.87
15 ABLK63	P17697	5/11/2008	03:06	9.02	21.87
16 ALCS63	P17698	5/11/2008	03:43	9.02	21.86
17 ZZZZZ	P17699	5/11/2008	04:19	9.02	21.87
18 ZZZZZ	P17700	5/11/2008	04:56	9.02	21.86
19 E0074	P17701	5/11/2008	05:32	9.02	21.86
20 E0074MS	P17702	5/11/2008	06:09	9.02	21.86
21 E0074MSD	P17703	5/11/2008	06:45	9.01	21.86
22 E0075	P17704	5/11/2008	07:22	9.01	21.86
23 E0076	P17705	5/11/2008	07:59	9.01	21.86
24 E0077	P17706	5/11/2008	08:35	9.01	21.86
25 E0078	P17707	5/11/2008	09:12	9.01	21.86
26 E0079	P17708	5/11/2008	09:48	9.01	21.86
27 E0082	P17709	5/11/2008	10:25	9.01	21.86
28 E0083	P17710	5/11/2008	11:01	9.01	21.86
29 AIBLK32	P17711	5/11/2008	11:38	9.01	21.86
30 AR1660332	P17712	5/11/2008	12:15	9.01	21.86
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)  
DCB = Decachlorobiphenyl (± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.



1H - FORM I ARO  
 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ALCS63(1)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: ALCS63

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: P17698

% Moisture: 0

Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SONC

Date Extracted: 04/29/2008

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 05/11/2008

Injection Volume: 1.0 (uL) GPC Factor: \_\_\_\_\_ Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	39	
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	38	
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

SOM01.2 (6/2007)

01149

1H - FORM I ARO  
 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
 ALCS63 (2)

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
 Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: ALCS63  
 Sample wt/vol: 30.00 (g/mL) G Lab File ID: P17698  
 % Moisture: 0 Decanted: (Y/N) N Date Received: \_\_\_\_\_  
 Extraction: (Type) SONC Date Extracted: 04/29/2008  
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/11/2008  
 Injection Volume: 1.0 (uL) GPC Factor: \_\_\_\_\_ Dilution Factor: 1.0  
 GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Sulfur Cleanup: (Y/N) N  
 Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	46	
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	46	
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

SOM01.2 (6/2007)

01150

1K - FORM I SV-TIC  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
E0077

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-0878.06  
Sample wt/vol: 30.10 (g/mL) G Lab File ID: G0125  
Level: (LOW/MED) LOW Extraction: (Type) SONC  
% Moisture: 51 Decanted: (Y/N) N Date Received: 04/24/2008  
Concentrated Extract Volume: 500 (uL) Date Extracted: 05/01/2008  
Injection Volume: 1.0 (uL) Date Analyzed: 05/13/2008  
GPC Cleanup: (Y/N) Y pH: 6.3 Dilution Factor: 1.0  
CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	17.35	540	J
02	000611-49-4	Naphthalene, 1-(2-naphthaleny	17.78	580	NJ
03		Unknown-02	17.85	490	J
04		Unknown-03	18.11	1200	J
05	000205-99-2	Benz[e]acephenanthrylene	18.58	780	NJ
06		Unknown-04	19.49	550	J
07		Unknown-05	19.69	520	J
08		Unknown-06	19.74	530	J
09		Unknown-07	19.95	600	J
10		Unknown-08	20.21	500	J
11		Unknown-09	20.56	760	J
12	000215-58-7	Benzo[b]triphenylene	21.25	630	NJB
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 <sup>2</sup>	Total Alkanes	N/A		

<sup>2</sup> EPA-designated Registry Number.

SOM01.2 (6/2007)

00455

Data Path : C:\MSDCHEM\1\DATA\  
Data File : G0125.D  
Acq On : 05/13/08 20:01  
Sample : E0077  
Misc : S-0878.06 30.1G/0.5mL  
ALS Vial : 10 Sample Multiplier: 1

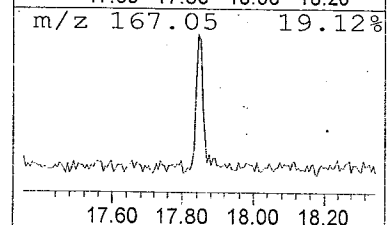
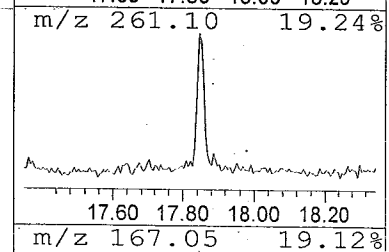
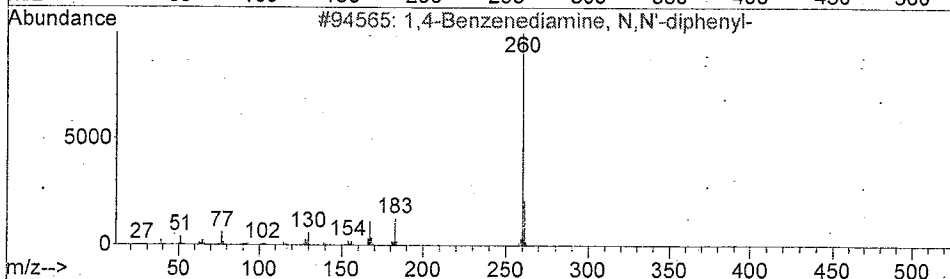
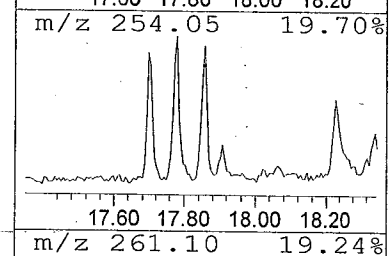
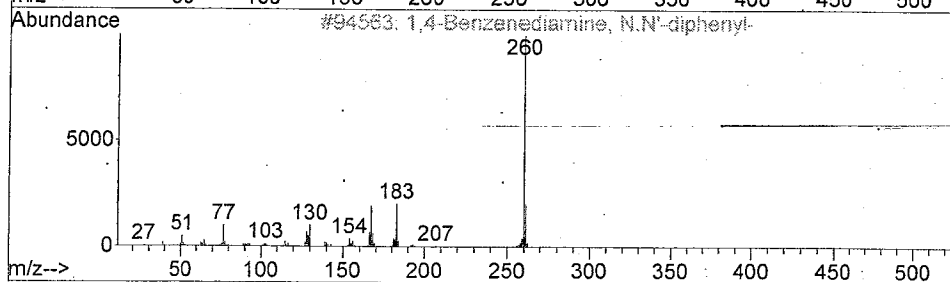
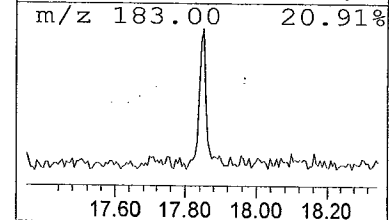
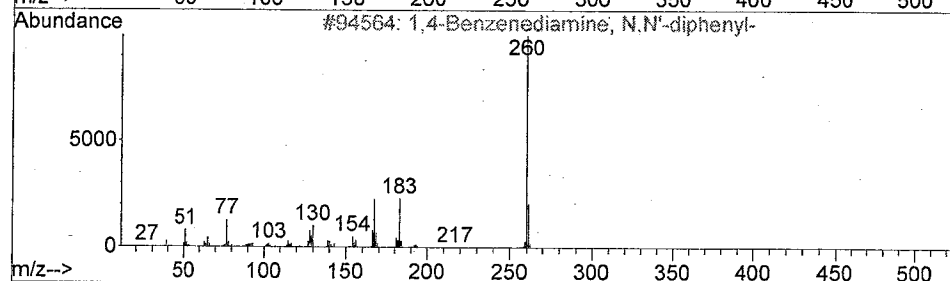
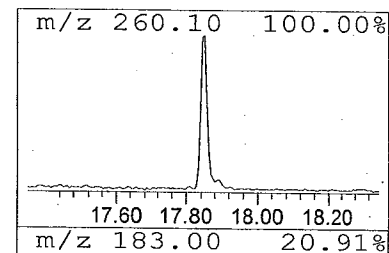
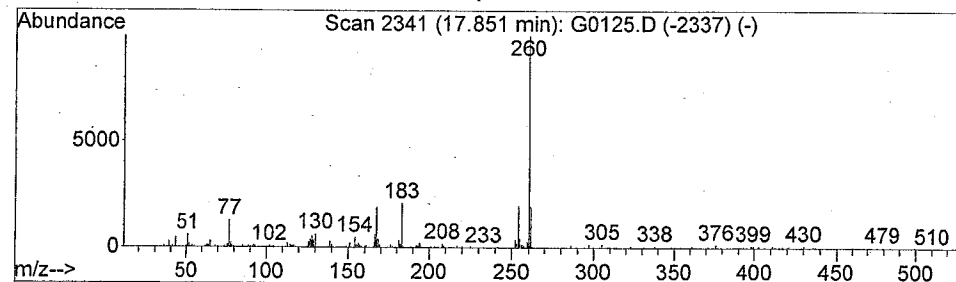
Operator: *ASR*  
Inst : G-5973

Quant Method : C:\MSDCHEM\1\METHODS\CLPG0111.M  
Quant Title : SEMI- VOLATILES ANALYSIS BY CLP SOM1.1

TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.e

\*\*\*\*\*  
Peak Number 3 1,4-Benzenediamine, N,N'-di... Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.	
17.85	7.29 ug/L	22069000	Chrysene-d12	17.16	
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,4-Benzenediamine, N,N'-diphenyl-	260	C18H16N2	000074-31-7	83
2	1,4-Benzenediamine, N,N'-diphenyl-	260	C18H16N2	000074-31-7	64
3	1,4-Benzenediamine, N,N'-diphenyl-	260	C18H16N2	000074-31-7	58
4	Naphtho[2,1-b]thiophene, 2-phenyl-	260	C18H12S	016587-38-5	43
5	4,7,9-Trihydroxy-2-methylnaphtho...	260	C13H8O6	055293-73-7	43



1K - FORM I SV-TIC  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0082

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0074

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: S-0878.09

Sample wt/vol: 30.10 (g/mL) G

Lab File ID: G0132

Level: (LOW/MED) LOW

Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) N

Date Received: 04/24/2008

Concentrated Extract Volume: 500 (uL)

Date Extracted: 05/01/2008

Injection Volume: 1.0 (uL)

Date Analyzed: 05/13/2008

GPC Cleanup: (Y/N) Y pH: 6.1

Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	000789-02-6	o,p'-DDT	16.70	320	NJ
02		Unknown-01	17.78	320	J
03		Unknown-02	18.10	420	J
04	000111-02-4	2,6,10,14,18,22-Tetracosahexa	18.29	270	NJ
05		Unknown-03	18.65	250	J
06		Unknown-04	19.07	260	J
07		Unknown-05	19.14	290	J
08		Unknown-06	19.24	280	J
09		Unknown-07	19.49	390	J
10		Unknown-08	20.56	280	J
11		Unknown-09	21.88	290	J
12	000559-74-0	Friedelan-3-one	24.86	490	NJ
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 <sup>2</sup>	Total Alkanes	N/A	1100	J

<sup>2</sup> EPA-designated Registry Number.

SOM01.2 (6/2007)

80615

Data Path : C:\MSDCHEM\1\DATA\  
Data File : G0132.D  
Acq On : 05/13/08 23:57  
Sample : E0082  
Misc : S-0878.09 30.1G/0.5mL  
ALS Vial : 3 Sample Multiplier: 1

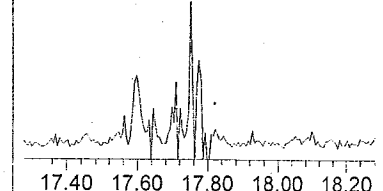
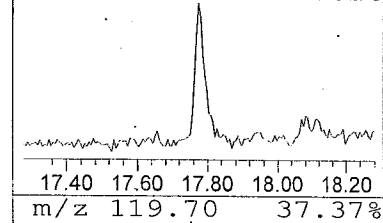
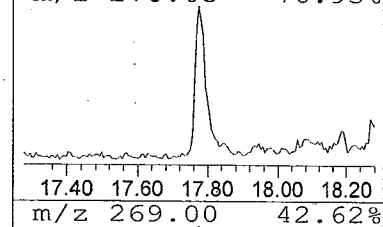
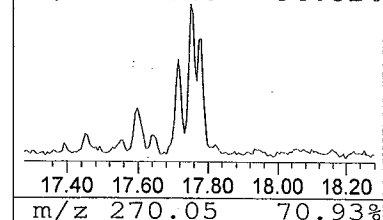
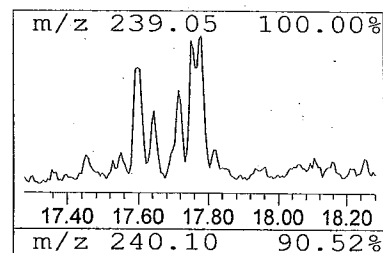
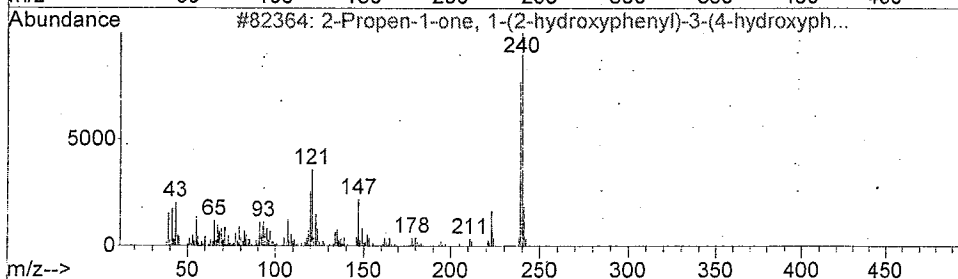
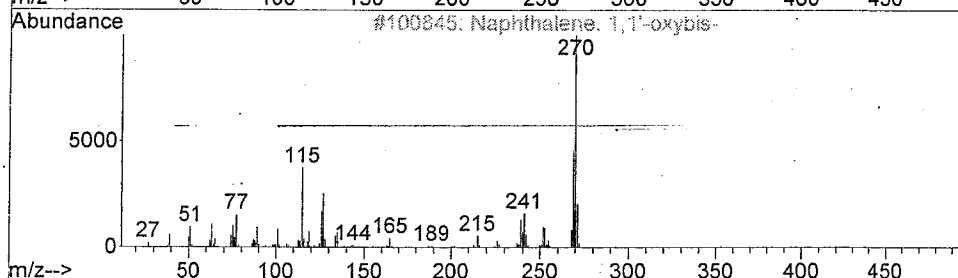
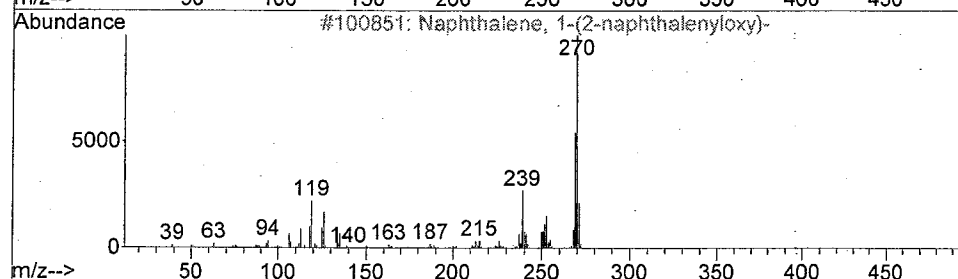
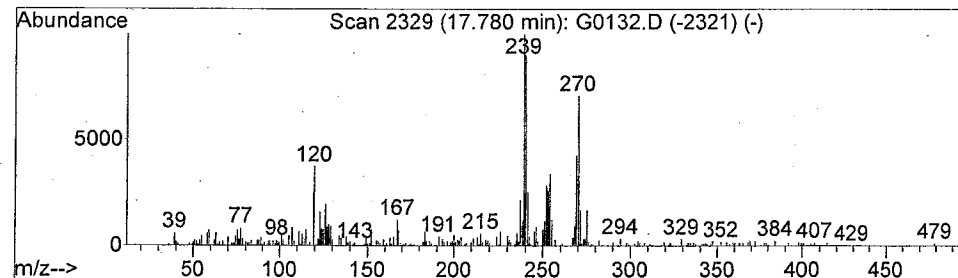
Operator:  
Inst : G-5973

Quant Method : C:\MSDCHEM\1\METHODS\CLPG0111.M  
Quant Title : SEMI- VOLATILES ANALYSIS BY CLP SOM1.1

TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.e

\*\*\*\*\*  
Peak Number 2 Naphthalene, 1-(2-naphthale... Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.		
17.78	7.22 ug/L	24866400	Chrysene-d12	17.16		
Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1		Naphthalene, 1-(2-naphthalenyloxy)-	270	C20H14O	000611-49-4	62
2		Naphthalene, 1,1'-oxybis-	270	C20H14O	000607-52-3	49
3		2-Propen-1-one, 1-(2-hydroxyphen...	240	C15H12O3	013323-66-5	38
4		Pyrrolo[2,3-f]quinolin-9-ol, 2,3...	240	C15H16N2O	199919-66-9	35
5		[1,1'-Biphenyl]-4,4'-dicarboxyli...	270	C16H14O4	000792-74-5	22





1K - FORM I SV-TIC  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
E0083

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0074  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-0878.10  
Sample wt/vol: 29.90 (g/mL) G Lab File ID: G0133  
Level: (LOW/MED) LOW Extraction: (Type) SONC  
% Moisture: 22 Decanted: (Y/N) N Date Received: 04/24/2008  
Concentrated Extract Volume: 500 (uL) Date Extracted: 05/01/2008  
Injection Volume: 1.0 (uL) Date Analyzed: 05/14/2008  
GPC Cleanup: (Y/N) Y pH: 5.7 Dilution Factor: 1.0  
CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	17.34	450	J
02		Unknown-02	17.78	530	J
03		Unknown-03	18.34	310	J
04		Unknown-04	18.66	340	J
05		Unknown-05	19.07	290	J
06		Unknown-06	19.14	310	J
07		Unknown-07	19.94	320	J
08		Unknown-08	20.41	330	J
09		Unknown-09	20.55	400	J
10		Unknown-10	20.73	560	J
11		Unknown-11	23.61	300	J
12		Unknown-12	24.87	440	J
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 <sup>2</sup>	Total Alkanes	N/A	1300	J

<sup>2</sup> EPA-designated Registry Number.

SOM01.2 (6/2007)

00553

## Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\  
Data File : G0133.D  
Acq On : 05/14/08 00:28  
Sample : E0083  
Misc : S-0878.10 29.9G/0.5mL  
ALS Vial : 4 Sample Multiplier: 1

Operator:  
Inst : G-5973

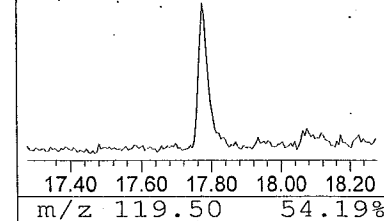
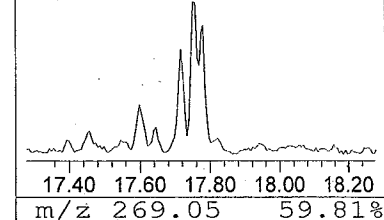
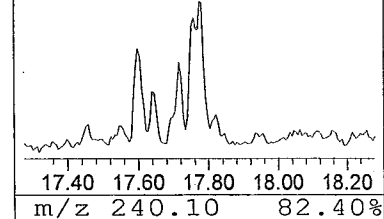
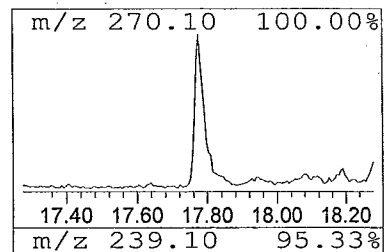
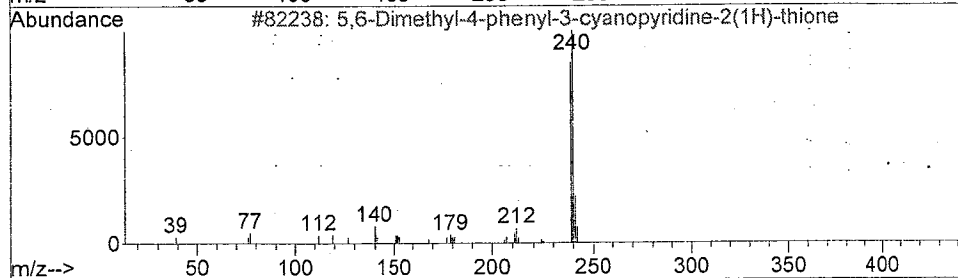
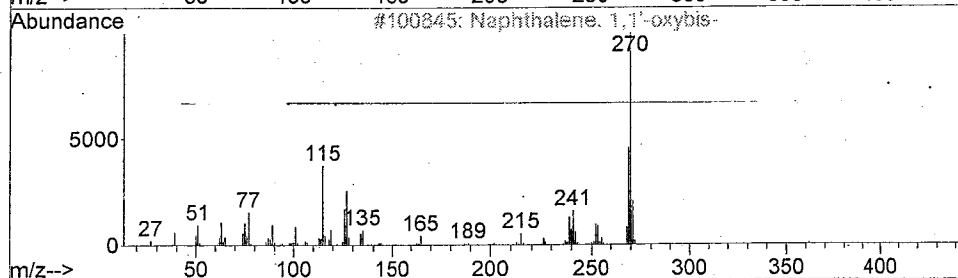
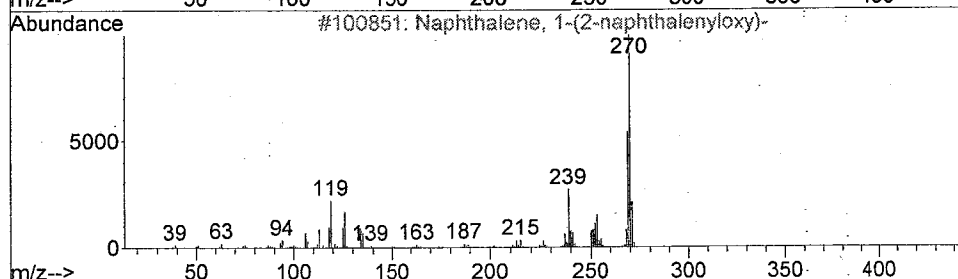
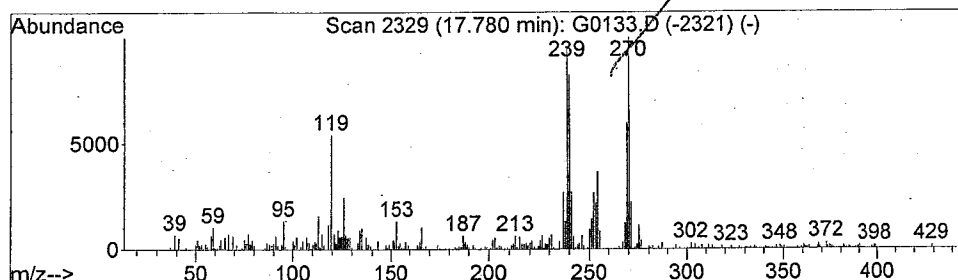
Quant Method : C:\MSDCHEM\1\METHODS\CLPG0111.M  
Quant Title : SEMI- VOLATILES ANALYSIS BY CLP SOM1.1

TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.e

\*\*\*\*\*  
Peak Number 2 Naphthalene, 1-(2-naphthalen... Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.78	12.47 ug/L	43431000	Chrysene-d12	17.16

Hit#	of	5	Tentative ID	MW	MolForm	CAS#	Qual
1			Naphthalene, 1-(2-naphthalenyloxy)-	270	C20H14O	000611-49-4	68
2			Naphthalene, 1,1'-oxybis-	270	C20H14O	000607-52-3	49
3			5,6-Dimethyl-4-phenyl-3-cyanopyr...	240	C14H12N2S	094639-18-6	30
4			4-Azafluorenone, 3-methylphenyli...	270	C19H14N2	1000216-54-3	30
5			9-Benzylidenexanthene	270	C20H14O	027980-52-5	27



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## REGION V

## ESD Central Regional Laboratory

## Data Tracking Form for Contract Samples

Sample Delivery Group: E0074 CERCLIS No: ILN000509228Case No: 37407 Site Name/Location: LAKE CALUMET SMELTING + REFINING (IL)Contractor or EPA Lab: Kap Technologies Data User: IEPANo. of Samples: 8 Date Sampled or Date Received: 19 MAY 08Have Chain-of-Custody records been received? Yes ☒ No ☐Have traffic reports or packing lists been received? Yes ☒ No ☐

If no, are traffic report or packing list numbers written on the Chain-of-Custody Record?

Yes ☐ No ☐

If no, which traffic report or packing list numbers are missing?

Are basic data forms in? Yes ☒ No ☐No of samples claimed: 8 No. of samples received: \_\_\_\_\_Received by: pdavis Date: 19 May 08Received by LSSS: pdavis Date: 20 May 08Review started: 6/3/8 Reviewer Signature: Stephanie TobinTotal time spent on review: 15 hrs Date review completed: 6/10/08Copied by: A. C. Harvey Date: June 17, 2008Mailed to user by: pdavis Date: 19 June 08**DATA USER:**

Please fill in the blanks below and return this form to:

Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: \_\_\_\_\_ Date: \_\_\_\_\_

Data review received by: \_\_\_\_\_ Date: \_\_\_\_\_

Inorganic Data Complete

☐ Suitable for Intended Purpose ☒ if OK

Organic Data Complete

☐ Suitable for Intended Purpose ☒ if OK

Dioxin data Complete

☐ Suitable for Intended Purpose ☒ if OK

SAS Data Complete

☐ Suitable for Intended Purpose ☒ if OK**PROBLEMS:** Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Date: \_\_\_\_\_

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

May 09, 2008

Illinois Environmental Protection Agency

1021 North Grand Avenue East

P.O. Box 19276

Springfield, IL 62794-9276

Telephone: (217) 524-1657

Fax: (217) 557-1165

RE: 37407

STAT Project No 08040871

Dear Mark Wagner:

STAT Analysis received 9 samples for the referenced project on 4/29/2008 11:00:00 AM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Craig Chawla

Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory.*

---

**Client:** Illinois Environmental Protection Agency  
**Project:** 37407  
**Lab Order:** 08040871

---

**Work Order Sample Summary**

---

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>
08040871-001A	T101	5-55252	4/21/2008 3:10:00 PM	4/29/2008
08040871-002A	T102	5-55265	4/21/2008 5:05:00 PM	4/29/2008
08040871-003A	T103	5-55218	4/22/2008 9:20:00 AM	4/29/2008
08040871-004A	T104	5-55232	4/22/2008 11:15:00 AM	4/29/2008
08040871-005A	T105	5-55237	4/22/2008 11:30:00 AM	4/29/2008
08040871-006A	T107	5-264056	4/22/2008 2:10:00 PM	4/29/2008
08040871-007A	T108	5-55289	4/22/2008 4:25:00 PM	4/29/2008
08040871-008A	T109	5-264088	4/23/2008 10:25:00 AM	4/29/2008
08040871-009A	ME0068 (T106)	5-264057	4/22/2008 2:10:00 PM	4/29/2008

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**CLIENT:** Illinois Environmental Protection Agency  
**Project:** 37407  
**Lab Order:** 08040871

---

**CASE NARRATIVE**

The TCLP metals MS/MSD prepared from sample T107 (08040871-006) had Lead recovery outside control limits (256%/-554% (MS/MSD) recovery, QC limits 75-125%). The sample concentration is greater than four times the spike level used.

The metals LCS (preparation batch 34980) had recovery outside of control limits for Antimony (150% recovery, QC Limits 80-120%).

The metals MS/MSD prepared from sample ME0068 (T106) (08040871-009) had the following outside control limits:

Selenium: 71% (MS) recovery (QC limits 75-125%)

Silver: 272% (MSD) recovery (QC limits 75-125%), 49% RPD (QC limit <20%)

Vanadium: 159% (MS) recovery (QC limits 75-125%)

The MS/MSD had recovery of other analytes outside of control limits, however the analyte concentration in the sample was greater than four times the spiking level for those elements.



**STAT Analysis Corporation**

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 09, 2008

Print Date: May 09, 2008

<b>Client:</b>	Illinois Environmental Protection Agency	<b>Client Sample ID:</b>	T101
<b>Lab Order:</b>	08040871	<b>Tag Number:</b>	5-55252
<b>Project:</b>	37407	<b>Collection Date:</b>	4/21/2008 3:10:00 PM
<b>Lab ID:</b>	08040871-001A	<b>Matrix:</b>	Soil/Sediment

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>TCLP Mercury</b>	<b>SW1311/7470A</b>					
Mercury	ND	0.00025		mg/L	1	Analyst: VA 5/5/2008
<b>TCLP Metals by ICP/MS</b>	<b>SW1311/6020 (SW3005A)</b>					
Arsenic	ND	0.4		mg/L	200	Analyst: JG 5/5/2008
Barium	0.55	0.4		mg/L	200	5/5/2008
Cadmium	ND	0.2		mg/L	200	5/5/2008
Chromium	ND	0.4		mg/L	200	5/5/2008
Lead	1300	0.2		mg/L	200	5/5/2008
Selenium	ND	0.4		mg/L	200	5/5/2008
Silver	ND	0.4		mg/L	200	5/5/2008

**Qualifiers:**

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- HT - Sample received past holding time
- \* - Non-accredited parameter

- RL - Reporting / Quantitation Limit for the analysis
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- H - Holding time exceeded

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 09, 2008

Print Date: May 09, 2008

<b>Client:</b>	Illinois Environmental Protection Agency	<b>Client Sample ID:</b>	T102
<b>Lab Order:</b>	08040871	<b>Tag Number:</b>	5-55265
<b>Project:</b>	37407	<b>Collection Date:</b>	4/21/2008 5:05:00 PM
<b>Lab ID:</b>	08040871-002A	<b>Matrix:</b>	Soil/Sediment

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>TCLP Mercury</b>	<b>SW1311/7470A</b>					
Mercury	ND	0.00025		mg/L	1	Analyst: VA 5/5/2008
<b>TCLP Metals by ICP/MS</b>	<b>SW1311/6020 (SW3005A)</b>					
Arsenic	ND	0.4		mg/L	200	Analyst: JG 5/5/2008
Barium	0.41	0.4		mg/L	200	5/5/2008
Cadmium	ND	0.2		mg/L	200	5/5/2008
Chromium	ND	0.4		mg/L	200	5/5/2008
Lead	1100	0.2		mg/L	200	5/5/2008
Selenium	ND	0.4		mg/L	200	5/5/2008
Silver	ND	0.4		mg/L	200	5/5/2008

**Qualifiers:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
HT - Sample received past holding time  
\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
H - Holding time exceeded

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 09, 2008

Print Date: May 09, 2008

<b>Client:</b>	Illinois Environmental Protection Agency	<b>Client Sample ID:</b>	T103
<b>Lab Order:</b>	08040871	<b>Tag Number:</b>	5-55218
<b>Project:</b>	37407	<b>Collection Date:</b>	4/22/2008 9:20:00 AM
<b>Lab ID:</b>	08040871-003A	<b>Matrix:</b>	Soil/Sediment

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>TCLP Mercury</b>	<b>SW1311/7470A</b>					
Mercury	ND	0.00025		mg/L	1	5/5/2008
<b>TCLP Metals by ICP/MS</b>	<b>SW1311/6020 (SW3005A)</b>					
Arsenic	ND	4		mg/L	2000	5/5/2008
Barium	ND	4		mg/L	2000	5/5/2008
Cadmium	ND	2		mg/L	2000	5/5/2008
Chromium	ND	4		mg/L	2000	5/5/2008
Lead	1700	2		mg/L	2000	5/5/2008
Selenium	ND	4		mg/L	2000	5/5/2008
Silver	ND	4		mg/L	2000	5/5/2008

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

**STAT Analysis Corporation**

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Report Date: May 09, 2008

Print Date: May 09, 2008

<b>Client:</b>	Illinois Environmental Protection Agency	<b>Client Sample ID:</b>	T104
<b>Lab Order:</b>	08040871	<b>Tag Number:</b>	5-55232
<b>Project:</b>	37407	<b>Collection Date:</b>	4/22/2008 11:15:00 AM
<b>Lab ID:</b>	08040871-004A	<b>Matrix:</b>	Soil/Sediment

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>TCLP Mercury</b>	<b>SW1311/7470A</b>					
Mercury	ND	0.00025		mg/L	1	Analyst: VA 5/5/2008
<b>TCLP Metals by ICP/MS</b>	<b>SW1311/6020 (SW3005A)</b>					
Arsenic	ND	4		mg/L	2000	Analyst: JG 5/5/2008
Barium	ND	4		mg/L	2000	5/5/2008
Cadmium	ND	2		mg/L	2000	5/5/2008
Chromium	ND	4		mg/L	2000	5/5/2008
Lead	300	2		mg/L	2000	5/5/2008
Selenium	ND	4		mg/L	2000	5/5/2008
Silver	ND	4		mg/L	2000	5/5/2008

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 09, 2008

Print Date: May 09, 2008

<b>Client:</b>	Illinois Environmental Protection Agency	<b>Client Sample ID:</b>	T105
<b>Lab Order:</b>	08040871	<b>Tag Number:</b>	5-55237
<b>Project:</b>	37407	<b>Collection Date:</b>	4/22/2008 11:30:00 AM
<b>Lab ID:</b>	08040871-005A	<b>Matrix:</b>	Soil/Sediment

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>TCLP Mercury</b>	<b>SW1311/7470A</b>					
Mercury	0.0012	0.00025		mg/L	1	Prep Date: 5/5/2008 Analyst: VA 5/5/2008
<b>TCLP Metals by ICP/MS</b>	<b>SW1311/6020 (SW3005A)</b>					
Arsenic	ND	4		mg/L	2000	Prep Date: 5/2/2008 Analyst: JG 5/5/2008
Barium	ND	4		mg/L	2000	5/5/2008
Cadmium	7.3	2		mg/L	2000	5/5/2008
Chromium	ND	4		mg/L	2000	5/5/2008
Lead	270	2		mg/L	2000	5/5/2008
Selenium	ND	4		mg/L	2000	5/5/2008
Silver	ND	4		mg/L	2000	5/5/2008

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	RL - Reporting / Quantitation Limit for the analysis
	J - Analyte detected below quantitation limits	S - Spike Recovery outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	R - RPD outside accepted recovery limits
	HT - Sample received past holding time	E - Value above quantitation range
	* - Non-accredited parameter	H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 09, 2008

Print Date: May 09, 2008

<b>Client:</b>	Illinois Environmental Protection Agency	<b>Client Sample ID:</b>	T107
<b>Lab Order:</b>	08040871	<b>Tag Number:</b>	5-264056
<b>Project:</b>	37407	<b>Collection Date:</b>	4/22/2008 2:10:00 PM
<b>Lab ID:</b>	08040871-006A	<b>Matrix:</b>	Soil/Sediment

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>TCLP Mercury</b>	<b>SW1311/7470A</b>					
Mercury	ND	0.00025		mg/L	1	5/5/2008
<b>TCLP Metals by ICP/MS</b>	<b>SW1311/6020 (SW3005A)</b>					
Arsenic	ND	0.4		mg/L	200	5/5/2008
Barium	1.9	0.4		mg/L	200	5/5/2008
Cadmium	0.48	0.2		mg/L	200	5/5/2008
Chromium	ND	0.4		mg/L	200	5/5/2008
Lead	99	0.2		mg/L	200	5/5/2008
Selenium	ND	0.4		mg/L	200	5/5/2008
Silver	ND	0.4		mg/L	200	5/5/2008

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded



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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 09, 2008

Print Date: May 09, 2008

<b>Client:</b>	Illinois Environmental Protection Agency	<b>Client Sample ID:</b>	T108
<b>Lab Order:</b>	08040871	<b>Tag Number:</b>	5-55289
<b>Project:</b>	37407	<b>Collection Date:</b>	4/22/2008 4:25:00 PM
<b>Lab ID:</b>	08040871-007A	<b>Matrix:</b>	Soil/Sediment

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>TCLP Mercury</b>	<b>SW1311/7470A</b>					
Mercury	ND	0.00025		mg/L	1	5/5/2008
<b>TCLP Metals by ICP/MS</b>	<b>SW1311/6020 (SW3005A)</b>					
Arsenic	ND	0.4		mg/L	200	5/5/2008
Barium	0.51	0.4		mg/L	200	5/5/2008
Cadmium	2	0.2		mg/L	200	5/5/2008
Chromium	ND	0.4		mg/L	200	5/5/2008
Lead	1200	0.2		mg/L	200	5/5/2008
Selenium	ND	0.4		mg/L	200	5/5/2008
Silver	ND	0.4		mg/L	200	5/5/2008

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

**STAT Analysis Corporation**

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 09, 2008

Print Date: May 09, 2008

<b>Client:</b>	Illinois Environmental Protection Agency	<b>Client Sample ID:</b>	T109
<b>Lab Order:</b>	08040871	<b>Tag Number:</b>	5-264088
<b>Project:</b>	37407	<b>Collection Date:</b>	4/23/2008 10:25:00 AM
<b>Lab ID:</b>	08040871-008A	<b>Matrix:</b>	Soil/Sediment

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>TCLP Mercury</b>	<b>SW1311/7470A</b>					
Mercury	ND	0.00025		mg/L	1	5/5/2008
<b>TCLP Metals by ICP/MS</b>	<b>SW1311/6020 (SW3005A)</b>					
Arsenic	ND	0.4		mg/L	200	5/5/2008
Barium	1.5	0.4		mg/L	200	5/5/2008
Cadmium	1.8	0.2		mg/L	200	5/5/2008
Chromium	ND	0.4		mg/L	200	5/5/2008
Lead	11	0.2		mg/L	200	5/5/2008
Selenium	ND	0.4		mg/L	200	5/5/2008
Silver	ND	0.4		mg/L	200	5/5/2008

**Qualifiers:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
HT - Sample received past holding time  
\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 09, 2008

Print Date: May 09, 2008

<b>Client:</b>	Illinois Environmental Protection Agency	<b>Client Sample ID:</b> ME0068 (T106)				
<b>Lab Order:</b>	08040871	<b>Tag Number:</b> 5-264057				
<b>Project:</b>	37407	<b>Collection Date:</b> 4/22/2008 2:10:00 PM				
<b>Lab ID:</b>	08040871-009A	<b>Matrix:</b> Soil/Sediment				
Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>	<b>SW7471A</b>		<b>Prep Date:</b> 5/2/2008		<b>Analyst:</b> VA	
Mercury	0.46	0.028		mg/Kg-dry	1	5/2/2008
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>		<b>Prep Date:</b> 5/7/2008		<b>Analyst:</b> JG	
Aluminum	15000	230		mg/Kg-dry	100	5/8/2008
Antimony	630	23		mg/Kg-dry	100	5/8/2008
Arsenic	1000	12		mg/Kg-dry	100	5/8/2008
Barium	870	1.2		mg/Kg-dry	10	5/7/2008
Beryllium	1.4	0.58		mg/Kg-dry	10	5/7/2008
Cadmium	110	0.58		mg/Kg-dry	10	5/7/2008
Calcium	54000	69		mg/Kg-dry	10	5/7/2008
Chromium	220	1.2		mg/Kg-dry	10	5/7/2008
Cobalt	17	1.2		mg/Kg-dry	10	5/7/2008
Copper	11000	290		mg/Kg-dry	1000	5/8/2008
Iron	100000	350		mg/Kg-dry	100	5/8/2008
Lead	69000	58		mg/Kg-dry	1000	5/8/2008
Magnesium	14000	35		mg/Kg-dry	10	5/7/2008
Manganese	5300	12		mg/Kg-dry	100	5/8/2008
Nickel	230	1.2		mg/Kg-dry	10	5/7/2008
Potassium	1200	35		mg/Kg-dry	10	5/7/2008
Selenium	8.8	1.2		mg/Kg-dry	10	5/7/2008
Silver	20	1.2		mg/Kg-dry	10	5/7/2008
Sodium	26000	69		mg/Kg-dry	10	5/7/2008
Thallium	ND	12		mg/Kg-dry	100	5/8/2008
Vanadium	53	1.2		mg/Kg-dry	10	5/7/2008
Zinc	24000	580		mg/Kg-dry	1000	5/8/2008
<b>Cyanide, Total</b>	<b>SW9012A</b>		<b>Prep Date:</b> 5/6/2008		<b>Analyst:</b> KB	
Cyanide	0.67	0.29		mg/Kg-dry	1	5/6/2008
<b>pH (25 °C)</b>	<b>SW9045C</b>		<b>Prep Date:</b> 5/7/2008		<b>Analyst:</b> FD	
pH	8.2		H	pH Units	1	5/7/2008
<b>Percent Moisture</b>	<b>D2974</b>		<b>Prep Date:</b> 5/1/2008		<b>Analyst:</b> FD	
Percent Moisture	14.0	0.01	*	wt%	1	5/2/2008

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
HT - Sample received past holding time  
\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
H - Holding time exceeded



USEPA Contract Laboratory Program  
Inorganic Traffic Report & Chain of Custody Record

<b>Date Shipped:</b> 4/22/2008		<b>Case No:</b> 37407	
<b>Carrier Name:</b> UPS		<b>DAS No:</b>	
<b>Airbill:</b> 126215892210082875		<b>SDG No:</b>	
<b>Shipped to:</b> ChemTech Consulting Group 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900		<b>For Lab Use Only</b>	
		<b>Lab Contract No:</b>	
		<b>Unit Price:</b>	
		<b>Transfer To:</b>	
		<b>Lab Contract No:</b>	
		<b>Unit Price:</b>	

INORGANIC SAMPLE NO.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0068	Soil/Sediment/ Jerry Willman	L/G	ICP/MS, Hg (21)	5-264057 (Ice Only) (1)	T106	S: 4/22/2008 14:10		009
ME0069	Ground Water/ Jerry Willman	L/G	CN (21), ICP/MS, Hg (21)	5-264058 (HNO3), 5-264059 (HNO3), 5-264060 (HNO3), 5-264061 (NaOH), 5-264062 (NaOH), 5-264063 (NaOH) (6)	G101F	S: 4/22/2008 15:40		

08040871

<b>Shipment for Case Complete 7N</b>	<b>Sample(s) to be used for laboratory QC:</b> ME0057, ME0066, ME0068, ME0069	<b>Additional Sampler Signature(s):</b>	<b>Cooler Temperature Upon Receipt:</b> 6	<b>Chain of Custody Seal Number:</b> 89309 89310
	<b>Concentration:</b> L = Low, M = Low/Medium, H = High CN = Cyanide, ICP, Hg, CN = CLP ICP Metals, Hg, CN, ICP/MS, Hg = CLP ICP Metals, Hg	<b>Type/Designate:</b> Composite = C, Grab = G	<b>Custody Seal Intact?</b> —	<b>Shipment Iced?</b> —

TR Number: 5-162075208-042208-0003

PR provides preliminary results. Requests for preliminary results will increase analytical costs.  
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

LABORATORY COPY



USEPA Contract Laboratory Program  
Generic Chain of Custody

Reference Case 37407

Client No:  
SDG No:

L

Date Shipped: 4/22/2008		Chain of Custody Record		Sampler Signature: <i>[Signature]</i>	
Carrier Name: UPS		Relinquished By (Date / Time)		Received By (Date / Time)	
Airbill: 126215892210082875		1 <i>[Signature]</i> 4/22 1900		4/22/08 1100	
Shipped to: ChemTech Consulting Group		2			
284 Sheffield Street		3			
Mountainside NJ 07092		4			
(908) 789-8900					

SAMPLE NO.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT		FOR LAB USE ONLY Sample Condition On Receipt
						DATE/TIME		
T101	Soil/Sediment/ Jerry Willman	L/G	T_MET (21)	5-55252 (Ice Only) (1)	T101	S:	4/21/2008 15:10	001
T102	Soil/Sediment/ Jerry Willman	L/G	T_MET (21)	5-55265 (1)	T102	S:	4/21/2008 17:05	002
T103	Soil/Sediment/ Jerry Willman	L/G	T_MET (21)	5-55218 (Ice Only) (1)	T103	S:	4/22/2008 9:20	003
T104	Soil/Sediment/ Jerry Willman	L/G	T_MET (21)	5-55232 (Ice Only) (1)	T104	S:	4/22/2008 11:15	004
T105	Soil/Sediment/ Jerry Willman	L/G	T_MET (21)	5-55237 (1)	T105	S:	4/22/2008 11:30	005
T107	Soil/Sediment/ Jerry Willman	L/G	T_MET (21)	5-264056 (Ice Only) (1)	T107	S:	4/22/2008 14:10	006
T108	Soil/Sediment/ Jerry Willman	L/G	T_MET (21)	5-55289 (Ice Only) (1)	T108	S:	4/22/2008 16:25	007

08040871  
080502

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: T107	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 6	Chain of Custody Seal Number: 89309
Analysis Key: T_MET = TCLP Metals	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? —	Shipment Lead? —

TR Number: 5-162075208-042208-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.  
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

LABORATORY COPY

F2/51.047 Page 1 of 1



USEPA Contract Laboratory Program  
Generic Chain of Custody

Reference Case 37407

Client No:  
SDG No:

L

Date Shipped: 4/23/2008		Chain of Custody Record		Sampler Signature	
Carrier Name: UPS		Relinquished By (Date / Time)		Received By (Date / Time)	
Airbill: 126215892210027149		1 <i>[Signature]</i> 4/23/08 1900		2 <i>[Signature]</i> 4/23/08 1900	
Shipped to: ChemTech Consulting Group		3		4	
284 Sheffield Street					
Mountainside NJ 07092					
(908) 789-8900					

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	PRESERVATIVE/ Bottles	TAG No./	STATION LOCATION	SAMPLE COLLECT		FOR LAB USE ONLY Sample Condition on Receipt
							DATE/TIME	DATE/TIME	
T109	Soil/Sediment/ Jerry Willman	L/G	T_MET (21)	5-264088 (Ice Only) (1)		T109	S: 4/23/2008	10:25	008

08040871

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 6	Chain of Custody Seal Number:	
				89315	
Analysis Key: T_MET = TCLP Metals	Concentration: L = Low, M = Low/Medium, H = High			Custody Seal Intact?	Shipment Iced?
				—	—

TR Number: 5-162075208-042308-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.  
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

LABORATORY USE ONLY

DATE: May 30, 2008

IEPA

**Attn: Mr. Mark Wagner**

1001 North Grand Avenue East

P.O. Box 19276

Springfield, IL 62794-9276

SITE NAME: Lake Calumet Smelting & Refining (IL)

<u>CASE NO.</u>	<u>LAB</u>	<u>SAMPLES</u>	<u>SDG</u>	<u>MATRIX</u>
37407	ChemTech	19	ME0047	soil

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

**Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.**

Data Received by: \_\_\_\_\_ Date: \_\_\_\_\_

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

Received by Data Management Coordinator, CRL for file.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

FROM: **U.S. EPA - Region 5**  
Sylvia Griffin  
Central Regional Laboratory  
536 S. Clark, 10th Floor  
Chicago, IL 60605

Sent By: Pat Johnson  
Data Coordinator  
ESAT Region 5 **TechLaw**

**RECEIVED**

JUN 02 2008

IEPA-BOL-FSRS



Controlled Document

# ESAT5.15.00012

Regional Transmittal Form

act 5-28-08

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

DATE: 5/22/08

SUBJECT: Review of Data  
Received for review on 5/14/08

FROM: Stephen L. Ostrodka, Chief (SRT-4J)  
Superfund Field Services Section

TO: Data User: IEPA

We have reviewed the data by CADRE for the following case:

SITE NAME: Lake Calumet Smelting & Refining (IL)

CASE NUMBER: 37407 SDG NUMBER: ME0047

Number and Type of Samples: 19 soils

Sample Numbers: ME0047-62, 64-65, 67

Laboratory: ChemTech Consulting Hrs. for Review: 16

+3

Following are our findings:

CC: Howard Pham  
Region 5 TOPO  
Mail Code: SRT-4J

**Below is a summary of the out-of-control audits and the possible effects on the data for this case:**

Nineteen (19) soil samples, numbered ME0047-62, 64-65, 67, were collected on 4/21/2008 and 4/22/2008. The lab received the samples on 4/23/2008 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using the CLP SOW ILM05.4 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

No raw data for percent solids was provided. Percent solids data were presented on a computer generated sheet. No handwritten values were provided. Percent solids calculations used by the laboratory were frequently rounded incorrectly. Seven out of the nineteen values reported by the laboratory were rounded up when they should not have been. The incorrectly reported percent solids results can result in low biased sample results. The reported results were corrected on samples ME0048, ME0049, ME0059, ME0060, ME0061, ME0062 and ME0064 by this reviewer.

### 1. HOLDING TIME:

The inorganic soil samples were reviewed for holding time violations using criteria developed for water samples. No defects were found.

### 2. CALIBRATIONS:

No defects were found for the calibration or the CRQL standard.

### 3. BLANKS:

The following inorganic samples are associated with a negative ICB/CCB or preparation blank concentration whose absolute value is greater than the method detection limit (MDL). The sample result is also greater than the MDL.

Hits less than 5 times the blank are qualified "J-".

Cyanide

ME0049, ME0052, ME0055, ME0056, ME0057, ME0060

### 4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

The following inorganic samples are associated with a matrix spike recovery which is high (>125%) indicating that sample results may be biased high. The required post spike was performed and results were less than or equal to 125%.

Hits are qualified "J"; non-detects are not qualified.

Cadmium

ME0047, ME0048, ME0049, ME0050, ME0051, ME0052, ME0053, ME0054,  
ME0055, ME0056, ME0057, ME0058, ME0059, ME0060, ME0061, ME0062,  
ME0064, ME0065, ME0067

No defects were found for the laboratory control sample.

### 5. LABORATORY AND FIELD DUPLICATE:

No defects were found for the laboratory duplicate samples. No samples were identified as field duplicates.

### 6. ICP ANALYSIS:

The following inorganic sample results are affected by an interference check "A" sample (ICSA) for which false positive concentration values greater than the MDL were obtained. The sample contains Al, Ca, Fe, or Mg at a level comparable to the ICSA.

Hits less than 10 times the value of the ICSA are qualified "J+"; non-detects are not qualified. Hits greater than 10 times the ICSA are not qualified.

Beryllium

ME0047, ME0048, ME0054, ME0055, ME0056, ME0057, ME0061, ME0062,  
ME0064

The following results are affected by an interference check "A" sample (ICSA) for which false negative concentration values greater than the absolute value of the MDL were obtained. The sample contains Al, Ca, Fe or Mg at a level comparable to that of the ICSA.

Hits less than 10 times the absolute value of the ICSA are qualified "J-", non-detects are qualified "UJ". Hits greater than 10 times the ICSA are not qualified.

Arsenic

ME0051, ME0062

Cadmium

ME0062

Silver

ME0047, ME0048, ME0050, ME0051, ME0054, ME0055, ME0056, ME0057,  
ME0061, ME0064

Thallium

ME0047, ME0048, ME0050, ME0051, ME0054, ME0055, ME0056

The following inorganic samples are associated with negative sample results whose absolute values are greater than the CRQL, indicating interference.

Non-detects are qualified "R".

Silver

ME0062

The following inorganic samples are associated with negative initial sample results whose absolute values were greater than the CRQL. Dilutions were performed for other elements were no longer greater than the CRQL. Results were changed by this reviewer to reflect the dilutions.

Non-detects are qualified "U".

Silver

ME0048, ME0050, ME0051

Thallium

ME0048

No defects were found for the serial dilution sample.

## 7. SAMPLE RESULTS:

The following inorganic samples have analyte concentrations reported above the method

detection limit (MDL) but below the quantitation limit (CRQL).  
Results are qualified "J".

Antimony  
ME0050, ME0051, ME0053, ME0062

Arsenic  
ME0058

Barium  
ME0049, ME0053, ME0058, ME0059, ME0065, ME0067

Beryllium  
ME0049, ME0052, ME0053, ME0054, ME0055, ME0056, ME0057, ME0058,  
ME0060, ME0061, ME0062, ME0064, ME0067

Cadmium  
ME0053

Calcium  
ME0049, ME0059

Cobalt  
ME0047, ME0049, ME0052, ME0053, ME0055, ME0056, ME0057, ME0058,  
ME0060, ME0061, ME0062, ME0065, ME0067

Magnesium  
ME0049, ME0059, ME0060

Mercury  
ME0047, ME0053, ME0062, ME0064

Potassium  
ME0049, ME0050, ME0052, ME0053, ME0054, ME0055, ME0056, ME0057,  
ME0059, ME0060, ME0061, ME0062, ME0064, ME0065, ME0067

Selenium  
ME0055, ME0056, ME0059, ME0061

Silver  
ME0049, ME0053, ME0057

Sodium  
ME0049, ME0052, ME0053, ME0055, ME0056, ME0057, ME0059, ME0062,  
ME0065, ME0067

Vanadium  
ME0052, ME0053, ME0054, ME0055, ME0056, ME0057, ME0060, ME0062,  
ME0065

Cyanide

ME0048, ME0049, ME0050, ME0052, ME0055, ME0056, ME0057, ME0060,  
ME0064

All data, except those qualified above, are acceptable.

**CADRE ILM05.4 Data Qualifier Sheet**

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.



## Analytical Results (Qualified Data)

Page 1 of 4

Case #: 37407

SDG : ME0047

Site :

LAKE CALUMET SMELTING

Lab. :

CHEM

Reviewer :

James Abston

Date :

5/22/2008

Number of Soil Samples : 19

Number of Water Samples : 0

Sample Number :	ME0047		ME0048		ME0049		ME0050		ME0051	
Sampling Location :	X101		X102		X103		X104		X105	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	4/21/2008		4/21/2008		4/21/2008		4/21/2008		4/21/2008	
Time Sampled :										
%Solids :	83.4		75.7		81.3		79.0		68.4	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	22700		6540		353		5820		27500	
ANTIMONY	25.8		178		54.3		2.9 J		4.0 J	
ARSENIC	27.7		81.8		10.8		31.0		8.2 J-	
BARIUM	176		356		15.8 J		167		139	
BERYLLIUM	0.88	J+	1.1	J+	0.040 J		1.9		1.3	
CADMIUM	18.0	J	72.1	J	0.92 J		1.6 J		36.6 J	
CALCIUM	10300		29200		129 J		3890		18000	
CHROMIUM	29.0		55.4		41.1		20.4		36.6	
COBALT	5.2	J	11.6		0.78 J		7.7		11.9	
COPPER	153		1170		134		107		46.0	
IRON	16000		41200		9110		51200		24900	
LEAD	7270		54000		90800		28600		45.9	
MAGNESIUM	5030		9010		134 J		775		12900	
MANGANESE	244		680		21.0		105		333	
MERCURY	0.083	J	1.2		0.20		0.62		0.13	U
NICKEL	21.6		95		21.8		27.3		34.2	
POTASSIUM	2540		693		20.7 J		329 J		6490	
SELENIUM	4.2	U	4.6	U	4.3	U	4.4	U	5.1	U
SILVER	1.2	UJ	2.6	UJ	1.0 J		6.3	UJ	7.3	UJ
SODIUM	2250		4210		278 J		905		3140	
THALLIUM	3.0	UJ	6.6	UJ	3.0	U	3.2	UJ	3.7	UJ
VANADIUM	35.7		30.2		6.1	U	28.2		52.7	
ZINC	18800		25500		5320		17700		27300	
CYANIDE	3.0	U	1.6	J	0.28	J-	1.3	J	3.7	U

## Analytical Results (Qualified Data)

Page 2 of 4

Case #: 37407

SDG : ME0047

Site :

LAKE CALUMET SMELTING

Lab. :

CHEM

Reviewer :

James Abston

Date :

5/22/2008

Sample Number :	ME0052		ME0053		ME0054		ME0055		ME0056	
Sampling Location :	X106		X107		X108		X109		X110	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	4/21/2008		4/21/2008		4/22/2008		4/22/2008		4/22/2008	
Time Sampled :										
%Solids :	66.1		79.8		86.4		88.8		89.7	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	847		1660		915		1210		1170	
ANTIMONY	92.0		2.0 J		1090		144		121	
ARSENIC	40.8		2.1		1220		80.9		56.2	
BARIUM	49.9		10.8 J		56.8		93.7		80.9	
BERYLLIUM	0.14 J		0.17 J		0.11 J+		0.23 J+		0.21 J+	
CADMIUM	8.8 J		0.60 J		74.8 J		29.3 J		25.3 J	
CALCIUM	2670		1070		2180		32900		32700	
CHROMIUM	14.4		4.3		17.8		39.1		34.3	
COBALT	1.3 J		1.1 J		8.1		2.5 J		2.7 J	
COPPER	637		26.5		6920		412		324	
IRON	6360		5150		22600		19700		23600	
LEAD	12500		5320		16000		12200		8110	
MAGNESIUM	1520		804		966		20100		19900	
MANGANESE	58.7		23.7		89.9		174		179	
MERCURY	1.0		0.069 J		0.64		0.49		1.4	
NICKEL	30.0		6.1		434		36.8		28.9	
POTASSIUM	80.2 J		215 J		79.6 J		168 J		163 J	
SELENIUM	5.2 U		4.4 U		6.7		1.0 J		1.0 J	
SILVER	3.2		0.35 J		8.2 J-		1.6 J-		1.6 J-	
SODIUM	252 J		295 J		1220		286 J		268 J	
THALLIUM	3.7 U		3.1 U		2.9 UJ		2.8 UJ		2.8 UJ	
VANADIUM	3.2 J		4.9 J		3.6 J		4.1 J		4.1 J	
ZINC	3320		8560		2720		2980		2760	
CYANIDE	0.76 J-		3.1 U		2.9 U		0.27 J-		0.48 J-	

## Analytical Results (Qualified Data)

Page 3 of 4

Case #: 37407

SDG : ME0047

Site :

LAKE CALUMET SMELTING

Lab. :

CHEM

Reviewer :

James Abston

Date :

5/22/2008

Sample Number :	ME0057		ME0058		ME0059		ME0060		ME0061	
Sampling Location :	X111		X112		X501		X113		X114	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	4/22/2008		4/22/2008		4/22/2008		4/22/2008		4/22/2008	
Time Sampled :										
%Solids :	78.6		77.6		76.6		81.9		74.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	584		3630		49.2		742		2740	
ANTIMONY	152		7.7	U	215		53.4		93.4	
ARSENIC	55.1		0.60	J	108		17.7		240	
BARIUM	45.3		15.6	J	2.0	J	45.7		193	
BERYLLIUM	0.18	J+	0.23	J	0.65	U	0.066	J	0.33	J+
CADMIUM	38.6	J	0.71	J	286	J	46.3	J	26.9	J
CALCIUM	2470		18600		240	J	1230		671	
CHROMIUM	24.1		8.5		3.9		5.2		21.3	
COBALT	1.5	J	3.3	J	6.5	U	1.8	J	5.3	J
COPPER	313		7.6		59.6		1710		4160	
IRON	18100		6380		1190		6460		34500	
LEAD	9090		24.7		9750		4530		7980	
MAGNESIUM	916		7400		69.8	J	176	J	1310	
MANGANESE	231		123		7.4		57.8		184	
MERCURY	4.5		0.13	U	15.0		0.63		0.31	
NICKEL	26.1		9.9		2.0	J	17.6		31.9	
POTASSIUM	41.5	J	928		54.0	J	31.5	J	210	J
SELENIUM	4.5	U	4.5	U	1.4	J	4.3	U	3.4	J
SILVER	0.59	J-	1.3	U	3.1		1.2	U	1.3	UJ
SODIUM	179	J	645	U	401	J	747		1460	
THALLIUM	3.2	U	3.2	U	3.2	U	3.1	U	3.3	U
VANADIUM	5.5	J	7.4		6.5	U	3.5	J	14.4	
ZINC	2480		122		5780		3850		2790	
CYANIDE	0.88	J-	3.2	U	3.3	U	0.42	J-	3.3	U

## Analytical Results (Qualified Data)

Page 4 of 4

Case #: 37407

SDG : ME0047

Site :

LAKE CALUMET SMELTING

Lab. :

CHEM

Reviewer :

James Abston

Date :

5/22/2008

Sample Number :	ME0062		ME0064		ME0065		ME0067			
Sampling Location :	X115		X201		X116		X117			
Matrix :	Soil		Soil		Soil		Soil			
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg			
Date Sampled :	4/22/2008		4/22/2008		4/22/2008		4/22/2008			
Time Sampled :										
%Solids :	79.1		74.9		87.0		39.5			
Dilution Factor :	1.0		1.0		1.0		1.0			
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	712		4360		346		1810			
ANTIMONY	1.0	J	619		264		24.5			
ARSENIC	6.7	J-	441		28.3		13.1			
BARIUM	41.4		258		5.7	J	42.3	J		
BERYLLIUM	0.27	J+	0.37	J+	0.57	U	0.18	J		
CADMIUM	2.0	J-	98.2	J	18.3	J	6.8	J		
CALCIUM	4780		20200		2550		10600			
CHROMIUM	57.1		73.8		1.6		16.1			
COBALT	2.0	J	13.3		0.76	J	2.5	J		
COPPER	83.1		9220		679		73.5			
IRON	20400		44000		2150		8520			
LEAD	257		15000		8480		2060			
MAGNESIUM	1480		3130		1120		3370			
MANGANESE	1190		332		20.4		302			
MERCURY	0.076	J	0.071	J	0.62		0.48			
NICKEL	9.9		445		24.8		13.1			
POTASSIUM	57.0	J	557	J	25.5	J	375	J		
SELENIUM	4.4	U	6.4		4.0	U	8.9	U		
SILVER	1.3	R	1.8	J-	4.6		2.5	U		
SODIUM	97.8	J	11800		105	J	227	J		
THALLIUM	3.2	U	3.3	U	2.9	U	6.3	U		
VANADIUM	5.8	J	18.7		1.1	J	12.8			
ZINC	455		4780		242		770			
CYANIDE	3.2	U	1.2	J	2.9	U	6.3	U		



USEPA Contract Laboratory Program  
Inorganic Traffic Report & Chain of Custody Record

Case No: 37407

DAS No:

SDG No:

ME0047 L

For Lab Use Only

Lab Contract No:

EL06047

Unit Price:

114

Transfer To:

4/23

Lab Contract No:

4/23

Unit Price:

4/23

Date Shipped: 4/22/2008  
Carrier Name: UPS  
Airbill: 126215892210082875  
Shipped to: ChemTech Consulting  
Group  
284 Sheffield Street  
Mountainside NJ 07092  
(908) 789-8900

Chain of Custody Record  
Relinquished By: (Signature) (Date / Time)  
Received By: (Signature) (Date / Time)  
4/23/08 9:45

INORGANIC SAMPLE NO.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNDOWN	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE NO.	FOR LAB USE ONLY Sample Condition On Receipt
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ME0047	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-066229 (Ice Only) (1)	X101	S: 4/21/2008 13:20	E0047	
ME0048	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55244 (Ice Only) (1)	X102	S: 4/21/2008 14:15	E0048	
ME0049	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55248 (Ice Only) (1)	X103	S: 4/21/2008 15:10	E0049	
ME0050	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55256 (Ice Only) (1)	X104	S: 4/21/2008 16:05	E0050	
ME0051	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55258 (Ice Only) (1)	X105	S: 4/21/2008 16:05	E0051	
ME0052	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55263 (Ice Only) (1)	X106	S: 4/21/2008 17:05	E0052	
ME0053	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55266 (Ice Only) (1)	X107	S: 4/21/2008 17:50	E0053	
ME0054	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55217 (Ice Only) (1)	X108	S: 4/22/2008 9:20	E0054	
ME0055	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55222 (Ice Only) (1)	X109	S: 4/22/2008 10:10	E0055	
ME0056	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55223 (Ice Only) (1)	X110	S: 4/22/2008 10:10	E0056	

Shipment for Case Complete 7N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
ME0057, ME0066, ME0068, ME0069		(Signature) 4/23	4°C	89309 89310

Analysis Key: Concentration: L = Low, M = Low/Medium, H = High Type/Designate: Composite = C, Grab = G

TR Number: 5-162075208-042208-0003



# USEPA Contract Laboratory Program Inorganic Traffic Report & Chain of Custody Record

Case No: 37407  
DAS No:  
SDG No: ME0047 L

Date Shipped: 4/22/2008	Chain of Custody Record		For Lab Use Only
Carrier Name: UPS	Relinquished By: (Date / Time)	Sampler Signature: (Date / Time)	Lab Contract No:
Airbill: 126215892210082875	1. <i>[Signature]</i> 4/22/08	<i>[Signature]</i>	Unit Price:
Shipped to: ChemTech Consulting Group	2. <i>[Signature]</i>	<i>[Signature]</i>	Transfer To:
284 Sheffield Street	3. <i>[Signature]</i>	<i>[Signature]</i>	Lab Contract No:
Mountainside NJ 07092	4. <i>[Signature]</i>	<i>[Signature]</i>	Unit Price:
(908) 789-8900			

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNDOWN	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
----------------------	-----------------	------------	--------------------	--------------------------------	------------------	--------------------------	--------------------	--

ME0057	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55231 (Ice Only) (1)	X111	S: 4/22/2008 11:15	E0057	
ME0058	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55233 (Ice Only) (1)	X112	S: 4/22/2008 11:15	E0058	
ME0059	Waste/ Jerry Willman	H/G	ICP, Hg, CN (21)	5-55226 (Ice Only) (1)	X501	S: 4/22/2008 11:30		
ME0060	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55238 (Ice Only) (1)	X113	S: 4/22/2008 13:00	E0060	
ME0061	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55273 (Ice Only) (1)	X114	S: 4/22/2008 14:10	E0061	
ME0062	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55277 (Ice Only) (1)	X115	S: 4/22/2008 14:10	E0062	
ME0064	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55281 (Ice Only) (1)	X201	S: 4/22/2008 15:30	E0064	
ME0065	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55285 (Ice Only) (1)	X116	S: 4/22/2008 16:25	E0065	
ME0066	Ground Water/ Jerry Willman	L/G	CN (21), ICP/MS, Hg (HNO <sub>3</sub> ), 5-55292 (HNO <sub>3</sub> ), 5-55293 (NaOH), 5-55294 (NaOH), 5-55295 (NaOH) (6)	5-277442 (Ice Only) (1)	G101	S: 4/22/2008 15:40	E0066	
ME0067	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-277442 (Ice Only) (1)	X117	S: 4/22/2008 17:10	E0067	

2D G1  
Final  
Sample

Shipment for Case Complete?	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
ME0057, ME0066, ME0068, ME0069		<i>[Signature]</i>	4°C	89309

Analysis Key: CN = Cyanide, ICP, Hg, CN = CLP ICP Metals, Hg, CN, ICP/MS, Hg = CLP ICP Metals, Hg

## **CHEMTECH**

284 Sheffield Street  
Mountainside, NJ 07092

### **SDG NARRATIVE**

USEPA

SDG # ME0047

CASE # 37407

CONTRACT # EPW06047

LAB NAME: CHEMTECH CONSULTING GROUP

LAB CODE: CHEM

CHEMTECH PROJECT #Z2497

#### **A. Number of Samples and Date of Receipt**

19 Soil Samples were delivered to the laboratory intact on 04/23/08.

#### **B. Parameters**

Test requested for Total Metals (by ICP-AES), Hg and Cn.

#### **C. Cooler Temp**

Indicator Bottle: Presence/Absence

Cooler: 4°C

#### **D. Detail Documentation (related to Sample Handling**

##### **Shipping, Analytical Problem, Temp of Cooler etc):**

Issue 1: Samples identified on the TR/COC having the station location in place of the sample ID are listed for TCLP analysis on the TR/COC, however per scheduling, ICP-AES Metals, Hg and CN is requested. In addition, sample ME0068 has "T106" as the station location on the TR/COC. The station location is the same format as other samples on the TR/COC that were designated for TCLP metals. The lab would like to confirm whether sample ME0068, listed for ICP/MS and Hg on the TR/COC is also for TCLP metals..

Issue 2: Samples ME0066 and ME0069 are listed for ICP-MS, Hg, and CN on the TR/COC, however per scheduling, ICP-AES is requested.

Issue 3: Sample ME0059 is listed on the TR/COC as a waste sample, however the Case is scheduled only for soil and water samples.



## **CHEMTECH**

**284 Sheffield Street**

**Mountainside, NJ 07092**

### **E. Corrective Action taken for above:**

Resolution 1: Please trans-ship the 9 soil samples identified for TCLP analysis using either UPS account # 621589 (billing zip code 62794) or Fed X account # 190984745 to:

Attn: Craig Chawla

Hi Tech Environmental Inc.

2242 West Harrison St.

Suite 200

Chicago, IL 60612

Resolution 2: In accordance with previous direction from Region 5, the laboratory will note the issue in the SDG Narrative, perform the analysis as indicated on the Scheduling Notification Form, and proceed with the analysis of the samples.

Resolution 3: Per Region 5, sample ME0059 was inadvertently listed as a waste sample, however should be listed on the TR/COC as a soil sample.

### **F. Analytical Techniques:**

All analyses were based on CLP Methodology by method ILM05.4

### **G. Calculation:**

Conversion of results from mg/L to mg/kg (Dry Weight Basis):

Calculation for ICP-AES:

$$\text{Mg/Kg} = (\text{Result in mg/L for ICP-AES}) \times 1000 \times 100 / \% \text{ Solid} \times \text{Fraction of Sample Amount Taken in Prep.}$$

Calculation for Hg:

$$\text{Mg/Kg} = (\text{Result in Ug/L-ppb for Hg}) \times 100 / \% \text{ Solid} \times \text{Fraction of Sample Amount Taken in Prep}$$

Calculation for CN:

$$\text{Mg/Kg} = (\text{Result in Ug/L-ppb for Hg}) \times 100 / \% \text{ Solid} \times \text{Fraction of Sample Amount Taken in Prep}$$

**CHEMTECH**

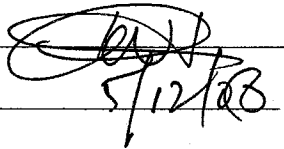
**284 Sheffield Street  
Mountainside, NJ 07092**

**H. QA/ QC**

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements except for the Cadmium. Duplicate sample did meet requirements. Serial Dilution did meet requirements.

I certify that the data package is in compliance with the terms and conditions of the contract both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Signature \_\_\_\_\_



Name: Parveen Hasan

Date \_\_\_\_\_

5/12/08

Title: Project Manager

MAY 14 2008

USEPA - CLP

COVER PAGE

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047

Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047

SOW No.: ILM05.4

EPA Sample No.

ME0047  
ME0048  
ME0049  
ME0050  
ME0051  
ME0052  
ME0053  
ME0054  
ME0055  
ME0056  
ME0057  
ME0057D  
ME0057S  
ME0058  
ME0059  
ME0060  
ME0061  
ME0062  
ME0064  
ME0065  
ME0067

Lab Sample ID

Z2497-01  
Z2497-02  
Z2497-03  
Z2497-04  
Z2497-05  
Z2497-06  
Z2497-07  
Z2497-08  
Z2497-09  
Z2497-10  
Z2497-11  
Z2497-12  
Z2497-13  
Z2497-14  
Z2497-15  
Z2497-16  
Z2497-17  
Z2497-18  
Z2497-19  
Z2497-20  
Z2497-21

ICP-AES ICP-MS

Were ICP-AES and ICP-MS interelement corrections applied? (Yes/No) YES \_\_\_\_\_

Were ICP-AES and ICP-MS background corrections applied? (Yes/No) YES \_\_\_\_\_

If yes, were raw data generated before application of background corrections? (Yes/No) NO \_\_\_\_\_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:   
Date: 5/12/08

Name: PARVEEN HASAN

Title: EPA PROJECT MANAGER

COVER PAGE

ILM05.4

## USEPA - CLP

3-IN  
BLANKSLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum	200.000	U	30.930	J	200.000	U	200.000	U	20.000	U	P
Antimony	60.000	U	60.000	U	60.000	U	60.000	U	6.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Barium	200.000	U	200.000	U	200.000	U	200.000	U	20.000	U	P
Beryllium	5.000	U	5.000	U	5.000	U	5.000	U	0.500	U	P
Cadmium	5.000	U	5.000	U	5.000	U	5.000	U	0.500	U	P
Calcium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Chromium	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Cobalt	50.000	U	50.000	U	50.000	U	50.000	U	5.000	U	P
Copper	25.000	U	25.000	U	25.000	U	25.000	U	2.500	U	P
Iron	100.000	U	100.000	U	100.000	U	100.000	U	10.000	U	P
Lead	10.000	U	10.000	U	6.990	J	10.000	U	1.000	U	P
Magnesium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Manganese	15.000	U	15.000	U	15.000	U	15.000	U	1.500	U	P
Mercury	0.200	U	0.200	U	0.200	U	0.200	U	0.100	U	CV
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	4.000	U	P
Potassium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Selenium	35.000	U	35.000	U	35.000	U	35.000	U	3.500	U	P
Silver	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Sodium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Thallium	25.000	U	25.000	U	25.000	U	25.000	U	-0.483	J	P
Vanadium	50.000	U	50.000	U	50.000	U	50.000	U	5.000	U	P
Zinc	60.000	U	60.000	U	6.460	J	60.000	U	6.000	U	P
Cyanide	-3.067	J	-2.377	J	-2.662	J	-2.364	J	-0.133	J	AS

## USEPA - CLP

3-IN  
BLANKSLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047

Preparation Blank Matrix (soil/water): \_\_\_\_\_

Preparation Blank Concentration Units (ug/L or mg/kg): \_\_\_\_\_

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum			200.000	U	200.000	U	200.000	U			P
Antimony			60.000	U	60.000	U	60.000	U			P
Arsenic			10.000	U	10.000	U	10.000	U			P
Barium			200.000	U	200.000	U	200.000	U			P
Beryllium			5.000	U	5.000	U	5.000	U			P
Cadmium			5.000	U	5.000	U	5.000	U			P
Calcium			5000.000	U	5000.000	U	5000.000	U			P
Chromium			10.000	U	10.000	U	10.000	U			P
Cobalt			50.000	U	50.000	U	50.000	U			P
Copper			25.000	U	25.000	U	25.000	U			P
Iron			100.000	U	100.000	U	100.000	U			P
Lead			10.000	U	10.000	U	10.000	U			P
Magnesium			5000.000	U	5000.000	U	5000.000	U			P
Manganese			15.000	U	15.000	U	15.000	U			P
Mercury			0.200	U	0.130	J	0.200	U			CV
Nickel			40.000	U	40.000	U	40.000	U			P
Potassium			5000.000	U	5000.000	U	5000.000	U			P
Selenium			35.000	U	35.000	U	35.000	U			P
Silver			10.000	U	10.000	U	10.000	U			P
Sodium			5000.000	U	5000.000	U	5000.000	U			P
Thallium			25.000	U	11.775	J	25.000	U			P
Vanadium			50.000	U	50.000	U	50.000	U			P
Zinc			60.000	U	60.000	U	60.000	U			P
Cyanide			10.000	U							AS

## USEPA - CLP

3-IN  
BLANKSLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047

Preparation Blank Matrix (soil/water): \_\_\_\_\_

Preparation Blank Concentration Units (ug/L or mg/kg): \_\_\_\_\_

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron	100.000	U	100.000	U	100.000	U	100.000	U			P
Lead											NR
Magnesium											NR
Manganese											NR
Mercury			0.200	U							CV
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

## USEPA - CLP

3-IN  
BLANKSLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047

Preparation Blank Matrix (soil/water): \_\_\_\_\_

Preparation Blank Concentration Units (ug/L or mg/kg): \_\_\_\_\_

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron			-39.965	J	100.000	U	-38.060	J			P
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR



## USEPA - CLP

4A-IN  
ICP-AES INTERFERENCE CHECK SAMPLELab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000	233000	95	234000	97	241000	99	243000	101
Antimony	0	589	-1.6		601	102	-3.6		608	103
Arsenic	0	101	-9.7		88.9	88	-6.5		96.9	96
Barium	2.0	495	1.2	60	537	108	3.3	165	549	111
Beryllium	0	475	0.88		466	98	0.85		481	101
Cadmium	0	940	0.12		958	102	-0.63		981	104
Calcium	235000	231000	224000	95	224000	97	231000	98	235000	102
Chromium	43.0	511	43.6	101	517	101	43.9	102	537	105
Cobalt	4.0	461	5.2	130	465	101	5.0	125	480	104
Copper	23.0	548	22.5	98	519	95	23.9	104	535	98
Iron	95600	94800	91000	95	91400	96	92900	97	94400	100
Lead	10.0	61.0	11.5	115	58.0	95	8.8	88	58.9	97
Magnesium	248000	251000	245000	99	245000	98	252000	102	255000	102
Manganese	19.0	502	18.6	98	499	99	20.6	108	521	104
Nickel	21.0	984	20.8	99	972	99	21.8	104	1000	102
Potassium	0	0	35.0		31.9		31.9		35.4	
Selenium	0	53.0	-2.9		49.1	93	-3.9		51.4	97
Silver	0	206	-7.1		200	97	-7.8		204	99
Sodium	0	0	1050		1250		1110		1350	
Thallium	0	103	-12.9		88.7	86	-7.7		98.9	96
Vanadium	0	494	-6.0		469	95	-6.1		487	99
Zinc	28.0	1030	42.5	152	960	93	45.6	163	1010	98

## USEPA - CLP

4A-IN

## ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000					238000	98	246000	102
Antimony	0	589					-1.5		615	104
Arsenic	0	101					-8.3		91.2	90
Barium	2.0	495					3.3	165	550	111
Beryllium	0	475					0.81		493	104
Cadmium	0	940					-1.7		1010	107
Calcium	235000	231000					234000	100	241000	104
Chromium	43.0	511					45.1	105	550	108
Cobalt	4.0	461					5.2	130	488	106
Copper	23.0	548					19.6	85	536	98
Iron	95600	94800					93600	98	97000	102
Lead	10.0	61.0					9.7	97	62.2	102
Magnesium	248000	251000					252000	102	261000	104
Manganese	19.0	502					22.5	118	533	106
Nickel	21.0	984					22.0	105	1020	104
Potassium	0	0					18.2		15.4	
Selenium	0	53.0					-0.78		52.1	98
Silver	0	206					-8.4		206	100
Sodium	0	0					1110		1080	
Thallium	0	103					-0.79		105	102
Vanadium	0	494					-5.9		501	101
Zinc	28.0	1030					46.1	165	1050	102

## USEPA - CLP

4A-IN  
ICP-AES INTERFERENCE CHECK SAMPLELab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000					232000	95	243000	101
Antimony	0	589					-0.070		610	104
Arsenic	0	101					-8.9		94.3	93
Barium	2.0	495					2.9	145	545	110
Beryllium	0	475					0.88		488	103
Cadmium	0	940					-2.1		997	106
Calcium	235000	231000					228000	97	237000	103
Chromium	43.0	511					44.5	103	540	106
Cobalt	4.0	461					5.7	143	483	105
Copper	23.0	548					19.0	83	529	97
Iron	95600	94800					92400	97	96000	101
Lead	10.0	61.0					8.2	82	63.3	104
Magnesium	248000	251000					246000	99	256000	102
Manganese	19.0	502					21.6	114	524	104
Nickel	21.0	984					20.5	98	1010	103
Potassium	0	0					32.8		13.0	
Selenium	0	53.0					-3.4		50.3	95
Silver	0	206					-8.5		204	99
Sodium	0	0					1380		937	
Thallium	0	103					-3.5		95.1	92
Vanadium	0	494					-6.9		497	101
Zinc	28.0	1030					43.5	155	1030	100

## USEPA - CLP

4A-IN  
ICP-AES INTERFERENCE CHECK SAMPLELab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000	241000	99	240000	100	237000	97	238000	99
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium	0	940	-0.52		948	101	-2.7		1060	113
Calcium	235000	231000	230000	98	228000	99	248000	106	248000	107
Chromium	43.0	511	42.4	99	523	102	46.4	108	556	109
Cobalt										
Copper										
Iron	95600	94800	92300	97	91900	97	99300	104	99600	105
Lead	10.0	61.0	10.1	101	65.5	107	9.0	90	60.4	99
Magnesium	248000	251000	251000	101	249000	99	265000	107	265000	106
Manganese	19.0	502	22.4	118	513	102	15.4	81	526	105
Nickel										
Potassium										
Selenium	0	53.0	-2.6		51.5	97	-6.3		47.7	90
Silver	0	206	-8.5		200	97	-8.9		202	98
Sodium										
Thallium	0	103	-3.7		94.9	92	-7.1		106	103
Vanadium	0	494	-6.7		473	96	-8.1		510	103
Zinc	28.0	1030	41.4	148	973	94	46.3	165	1090	106

## USEPA - CLP

4A-IN  
ICP-AES INTERFERENCE CHECK SAMPLELab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000					235000	96	241000	100
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium	0	940					-2.2		970	103
Calcium	235000	231000					228000	97	234000	101
Chromium	43.0	511					42.1	98	536	105
Cobalt										
Copper										
Iron	95600	94800					91400	96	93700	99
Lead	10.0	61.0					8.9	89	60.0	98
Magnesium	248000	251000					245000	99	252000	100
Manganese	19.0	502					16.5	87	513	102
Nickel										
Potassium										
Selenium	0	53.0					-1.4		48.8	92
Silver	0	206					-9.3		200	97
Sodium										
Thallium	0	103					-4.2		99.6	97
Vanadium	0	494					-8.5		479	97
Zinc	28.0	1030					42.3	151	1010	98

## USEPA - CLP

4A-IN

## ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000					239000	98	241000	100
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium	0	940					-2.1		981	104
Calcium	235000	231000					237000	101	237000	103
Chromium	43.0	511					46.0	107	541	106
Cobalt										
Copper										
Iron	95600	94800					94400	99	95000	100
Lead	10.0	61.0					8.6	86	66.7	109
Magnesium	248000	251000					253000	102	255000	102
Manganese	19.0	502					17.2	91	518	103
Nickel										
Potassium										
Selenium	0	53.0					-1.5		50.2	95
Silver	0	206					-8.4		202	98
Sodium										
Thallium	0	103					-5.1		101	98
Vanadium	0	494					-8.2		484	98
Zinc	28.0	1030					43.9	157	1030	100

## USEPA - CLP

5A-IN  
MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME0057S

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Matrix: (soil/water) SOIL Level: (low/med) LOW% Solids for Sample: 78.6Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony		182.7023	151.6221	25.45	122		P
Arsenic		68.3950	55.0655	10.18	131		P
Barium	75-125	648.6209	45.3257	508.91	119		P
Beryllium	75-125	14.9955	0.1807	12.72	116		P
Cadmium	75-125	55.9828	38.5992	12.72	137	N	P
Calcium							NR
Chromium	75-125	86.4491	24.0935	50.89	123		P
Cobalt	75-125	153.0483	1.5280	127.23	119		P
Copper		377.6062	313.0439	63.61	101		P
Iron							NR
Lead		9089.2977	9086.0318	5.09	64		P
Magnesium							NR
Manganese	75-125	380.6438	230.7366	127.23	118		P
Mercury		5.0566	4.4981	0.64	87		CV
Nickel	75-125	183.5515	26.0980	127.23	124		P
Potassium							NR
Selenium	75-125	15.9567	4.4529	12.72	125		P
Silver	75-125	15.3728	0.5935	12.72	116		P
Sodium							NR
Thallium	75-125	14.8830	3.1807	12.72	117		P
Vanadium	75-125	160.3651	5.5369	127.23	122		P
Zinc		2701.7710	2479.4313	127.23	175		P
Cyanide	75-125	6.7823	0.8814	6.36	93		AS

Comments:

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## USEPA - CLP

5B-IN  
POST-DIGESTION SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME0057A

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Matrix: (soil/water) SOIL Level: (low/med) LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony							NR
Arsenic							NR
Barium							NR
Beryllium							NR
Cadmium		882.66	303.39	600.0	97		P
Calcium							NR
Chromium							NR
Cobalt							NR
Copper							NR
Iron							NR
Lead							NR
Magnesium							NR
Manganese							NR
Nickel							NR
Potassium							NR
Selenium							NR
Silver							NR
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc							NR
Cyanide							NR

Comments:

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## USEPA - CLP

6-IN  
DUPLICATES

EPA SAMPLE NO.

ME0057D

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Matrix: (soil/water) SOIL Level: (low/med) LOW% Solids for Sample: 78.6 % Solids for Duplicate: 78.9Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)		Duplicate (D)		RPD	Q	M
			C		C			
Aluminum		583.4434		565.4739		3		P
Antimony		151.6221		147.2697		3		P
Arsenic		55.0655		53.7621		2		P
Barium	25.4	45.3257		43.7004		4		P
Beryllium		0.1807	J	0.1788	J	1		P
Cadmium		38.5992		38.0732		1		P
Calcium	636.1	2470.6514		2439.0687		1		P
Chromium		24.0935		23.8142		1		P
Cobalt		1.5280	J	1.5541	J	2		P
Copper		313.0439		301.8212		4		P
Iron		18071.0579		17752.1495		2		P
Lead		9086.0318		8873.3543		2		P
Magnesium	636.1	915.5598		899.5789		2		P
Manganese		230.7366		226.0426		2		P
Mercury		4.4981		4.6393		3		CV
Nickel		26.0980		25.5782		2		P
Potassium		41.5013	J	39.6641	J	5		P
Selenium		4.4529	U	4.4529	U			P
Silver		0.5935	J	0.4790	J	21		P
Sodium		178.6139	J	198.5744	J	11		P
Thallium		3.1807	U	3.1807	U			P
Vanadium		5.5369	J	5.1279	J	8		P
Zinc		2479.4313		2473.9230		0		P
Cyanide		0.8814	J	0.8997	J	2		AS

## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Instrument Type: AS Instrument ID: CN Date: 01/15/2008Preparation Method: DS2Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		20	
Antimony		6	
Arsenic		1	
Barium		20	
Beryllium		0.5	
Cadmium		0.5	
Calcium		500	
Chromium		1	
Cobalt		5	
Copper		2.5	
Iron		10	
Lead		1	
Magnesium		500	
Manganese		1.5	
Mercury		0.1	
Nickel		4	
Potassium		500	
Selenium		3.5	
Silver		1	
Sodium		500	
Thallium		2.5	
Vanadium		5	
Zinc		6	
Cyanide	578.00	2.5	0.020

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Instrument Type: AS Instrument ID: CN Date: 01/15/2008Preparation Method: NP1Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		200	
Antimony		60	
Arsenic		10	
Barium		200	
Beryllium		5	
Cadmium		5	
Calcium		5000	
Chromium		10	
Cobalt		50	
Copper		25	
Iron		100	
Lead		10	
Magnesium		5000	
Manganese		15	
Mercury		0.2	
Nickel		40	
Potassium		5000	
Selenium		35	
Silver		10	
Sodium		5000	
Thallium		25	
Vanadium		50	
Zinc		60	
Cyanide	578.00	10	2.1

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Instrument Type: CV Instrument ID: CV1 Date: 01/15/2008Preparation Method: CS1Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		20	
Antimony		6	
Arsenic		1	
Barium		20	
Beryllium		0.5	
Cadmium		0.5	
Calcium		500	
Chromium		1	
Cobalt		5	
Copper		2.5	
Iron		10	
Lead		1	
Magnesium		500	
Manganese		1.5	
Mercury	253.70	0.1	0.024
Nickel		4	
Potassium		500	
Selenium		3.5	
Silver		1	
Sodium		500	
Thallium		2.5	
Vanadium		5	
Zinc		6	
Cyanide		2.5	

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Instrument Type: P Instrument ID: P2 Date: 01/15/2008Preparation Method: HS1Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.20	20	2.4
Antimony	206.80	6	0.78
Arsenic	189.00	1	0.46
Barium	493.40	20	1.0
Beryllium	313.00	0.5	0.030
Cadmium	226.50	0.5	0.13
Calcium	317.90	500	29.4
Chromium	267.70	1	0.14
Cobalt	228.60	5	0.53
Copper	324.70	2.5	0.17
Iron	271.40	10	3.5
Lead	220.40	1	0.41
Magnesium	279.00	500	3.7
Manganese	257.60	1.5	0.11
Mercury		0.1	
Nickel	231.60	4	0.64
Potassium	766.50	500	2.1
Selenium	196.00	3.5	0.68
Silver	328.00	1	0.13
Sodium	330.20	500	69.4
Thallium	190.90	2.5	0.44
Vanadium	292.40	5	0.79
Zinc	206.20	6	1.0
Cyanide		2.5	

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Instrument Type: P Instrument ID: P2 Date: 01/15/2008Preparation Method: NP1Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.20	200	29.9
Antimony	206.80	60	9.3
Arsenic	189.00	10	3.8
Barium	493.40	200	8.9
Beryllium	313.00	5	0.40
Cadmium	226.50	5	1.4
Calcium	317.90	5000	187
Chromium	267.70	10	1.8
Cobalt	228.60	50	3.4
Copper	324.70	25	0.90
Iron	271.40	100	15.3
Lead	220.40	10	3.8
Magnesium	279.00	5000	175
Manganese	257.60	15	1.2
Mercury		0.2	
Nickel	231.60	40	4.5
Potassium	766.50	5000	158
Selenium	196.00	35	5.8
Silver	328.00	10	1.8
Sodium	330.20	5000	655
Thallium	190.90	25	9.2
Vanadium	292.40	50	6.4
Zinc	206.20	60	6.0
Cyanide		10	

Comments:

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USEPA - CLP  
12-IN  
PREPARATION LOG

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047

Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047

Preparation Method: CS1

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
CCB	05/05/2008		100
CCV	05/05/2008		100
CRI	05/05/2008		100
ICB	05/05/2008		100
ICV	05/05/2008		100
LCSS	05/05/2008	0.20	100
ME0047	05/05/2008	0.21	100
ME0048	05/05/2008	0.20	100
ME0049	05/05/2008	0.20	100
ME0050	05/05/2008	0.20	100
ME0051	05/05/2008	0.22	100
ME0052	05/05/2008	0.20	100
ME0053	05/05/2008	0.21	100
ME0054	05/05/2008	0.20	100
ME0055	05/05/2008	0.20	100
ME0056	05/05/2008	0.20	100
ME0057	05/05/2008	0.20	100
ME0057D	05/05/2008	0.20	100
ME0057S	05/05/2008	0.20	100
ME0058	05/05/2008	0.20	100
ME0059	05/05/2008	0.21	100
ME0060	05/05/2008	0.20	100
ME0061	05/05/2008	0.20	100
ME0062	05/05/2008	0.22	100
ME0064	05/05/2008	0.20	100
ME0065	05/05/2008	0.21	100
ME0067	05/05/2008	0.20	100
PBS	05/05/2008	0.20	100
S0	05/05/2008		100
S0.2	05/05/2008		100
S2.5	05/05/2008		100
S5.0	05/05/2008		100
S7.5	05/05/2008		100
S10.0	05/05/2008		100

USEPA - CLP  
12-IN  
PREPARATION LOG

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047

Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047

Preparation Method: DS2

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
ICV	04/29/2008		50
LCSS	04/29/2008	1.00	50
ME0047	04/29/2008	1.00	50
ME0048	04/29/2008	1.00	50
ME0049	04/29/2008	1.00	50
ME0050	04/29/2008	1.00	50
ME0051	04/29/2008	1.00	50
ME0052	04/29/2008	1.00	50
ME0053	04/29/2008	1.00	50
ME0054	04/29/2008	1.00	50
ME0055	04/29/2008	1.00	50
ME0056	04/29/2008	1.00	50
ME0057	04/29/2008	1.00	50
ME0057D	04/29/2008	1.00	50
ME0057S	04/29/2008	1.00	50
ME0058	04/29/2008	1.00	50
ME0059	04/29/2008	1.00	50
ME0060	04/29/2008	1.00	50
ME0061	04/29/2008	1.00	50
ME0062	04/29/2008	1.00	50
ME0064	04/29/2008	1.00	50
ME0065	04/29/2008	1.00	50
ME0067	04/29/2008	1.00	50
MIDRANGE	04/29/2008		50
PBS	04/29/2008	1.00	50

## 12-IN PREPARATION LOG

Preparation Method: HS1

[illegible]

## USEPA - CLP

13-IN  
ANALYSIS RUN LOGLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Instrument ID: CN Analysis Method: ASStart Date: 05/02/2008 End Date: 05/02/2008

EPA Sample No.	D/F	Time	Analytes																									
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
S0	1.0	1049																								X		
S5.0	1.0	1049																								X		
S10	1.0	1049																								X		
S100	1.0	1049																								X		
S250	1.0	1049																								X		
S500	1.0	1049																								X		
ICV	1.0	1108																								X		
ICB	1.0	1108																								X		
CRI	1.0	1206																								X		
CCV	1.0	1215																								X		
CCB	1.0	1216																								X		
MIDRANGE	1.0	1216																								X		
PBS	1.0	1216																								X		
LCSS	1.0	1216																								X		
ME0047	1.0	1216																								X		
ME0048	1.0	1216																								X		
ME0049	1.0	1220																								X		
ME0050	1.0	1220																								X		
ME0051	1.0	1220																								X		
ME0052	1.0	1220																								X		
CCV	1.0	1227																								X		
CCB	1.0	1227																								X		
ME0053	1.0	1227																								X		
ME0054	1.0	1227																								X		
ME0055	1.0	1227																								X		
ME0056	1.0	1227																								X		
ME0057	1.0	1227																								X		
ME0057D	1.0	1227																								X		
ME0057S	1.0	1227																								X		
CRI	1.0	1323																								X		
CCV	1.0	1325																								X		
CCB	1.0	1325																								X		
ME0058	1.0	1332																								X		

# 13-IN ANALYSIS RUN LOG

Contract: EPW06047

Case No.: 37407

NRAS No.: \_\_\_\_\_

SDG No.: ME0047

Analysis Method: AS

Start Date: 05/02/2008

End Date: 05/02/2008

[illegible]

## USEPA - CLP

13-IN  
ANALYSIS RUN LOGLab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Instrument ID: CV1 Analysis Method: CVStart Date: 05/05/2008 End Date: 05/05/2008

EPA Sample No.	D/F	Time	Analytes																	
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E
S0	1.0	1057															X			
S0.2	1.0	1059															X			
S2.5	1.0	1101															X			
S5.0	1.0	1103															X			
S7.5	1.0	1105															X			
S10.0	1.0	1107															X			
ICV	1.0	1110															X			
ICB	1.0	1112															X			
CRI	1.0	1114															X			
CCV	1.0	1116															X			
CCB	1.0	1118															X			
PBS	1.0	1120															X			
LCSS	1.0	1123															X			
ME0047	1.0	1125															X			
ME0048	1.0	1127															X			
ME0049	1.0	1129															X			
ME0050	1.0	1132															X			
ME0051	1.0	1134															X			
CCV	1.0	1136															X			
CCB	1.0	1138															X			
ME0052	1.0	1140															X			
ME0053	1.0	1142															X			
ME0054	1.0	1144															X			
ME0055	1.0	1146															X			
ME0056	1.0	1148															X			
ME0057	1.0	1150															X			
ME0057D	1.0	1152															X			
CRI	1.0	1154															X			
CCV	1.0	1157															X			
CCB	1.0	1159															X			
ZZZZZZ	1.0	1201																		
ME0058	1.0	1203															X			
ME0059	1.0	1205																		

# 13-IN ANALYSIS RUN LOG

EPA Sample No.	D/F	Time	Analytes																									
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
ME0060	1.0	1207														X												
ME0061	1.0	1209														X												
ME0062	1.0	1212														X												
ME0064	1.0	1214														X												
CCV	1.0	1217														X												
CCB	1.0	1219														X												
ME0065	1.0	1221														X												
ME0067	1.0	1223														X												
ZZZZZZ	1.0	1225																										
ZZZZZZ	1.0	1227																										
ZZZZZZ	1.0	1230																										
ZZZZZZ	1.0	1232																										
ZZZZZZ	1.0	1234																										
CRI	1.0	1237														X												
CRI	1.0	1239														X												
CCV	1.0	1241														X												
CCB	1.0	1243														X												
ZZZZZZ	1.0	1245																										
ZZZZZZ	1.0	1247																										
ZZZZZZ	1.0	1249																										
ZZZZZZ	1.0	1252																										
ZZZZZZ	1.0	1254																										
ZZZZZZ	1.0	1256																										
ZZZZZZ	1.0	1259																										
CCV	1.0	1301														X												
CCB	1.0	1303														X												
ZZZZZZ	1.0	1305																										
ZZZZZZ	1.0	1307																										
ME0057S	1.0	1309														X												
ME0059	5.0	1311																										



## USEPA - CLP

13-IN  
ANALYSIS RUN LOGLab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0047Instrument ID: P2 Analysis Method: PStart Date: 05/05/2008 End Date: 05/05/2008

EPA Sample No.	D/F	Time	Analytes																									
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
S0	1.0	1220	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S	1.0	1223	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICV	1.0	1227	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICB	1.0	1230	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CRI	1.0	1232		X	X		X	X		X	X	X		X		X		X		X	X		X	X	X			
ICSA	1.0	1244	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICSAB	1.0	1246	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCV	1.0	1248	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB	1.0	1250	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
PBS	1.0	1252	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
LCSS	1.0	1254	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0047	1.0	1257	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0048	1.0	1259	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0049	1.0	1309	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0050	1.0	1314	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0051	1.0	1317	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0052	1.0	1323	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0053	1.0	1330	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0054	1.0	1332	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCV	1.0	1337	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB	1.0	1341	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0055	1.0	1344	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0056	1.0	1346	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0057	1.0	1357	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0057D	1.0	1359	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0057L	5.0	1402	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ME0057S	1.0	1404		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X			
ME0058	1.0	1407	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CRI	1.0	1418		X	X		X	X		X	X	X		X		X		X		X	X		X	X	X			
ICSA	1.0	1422	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICSAB	1.0	1425	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCV	1.0	1427	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB	1.0	1429	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			

REPORTED DILUTIONS CHANGED  
BY S. CONNET (ESAT DATA REVIEWER)

FORM XIII-IN

~ 5-27-08

ILM05.4

# 13-IN ANALYSIS RUN LOG

Contract: EPW06047

Case No.: 37407

NRAS No.: \_\_\_\_\_

SDG No.: ME0047

### Analysis Method: P

End Date: 05/05/2008

EPA Sample No.	D/F	Time	Analytes																											
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
ME0059	1.0	1434	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X						
ME0060	1.0	1439	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0061	1.0	1443	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0062	1.0	1445	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0064	1.0	1448	X	X	X	X	X	X	X	X	X		X		X	X		X	X	X	X	X	X	X	X					
ME0065	1.0	1453	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0067	1.0	1456	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0047	5.0	1502																							X					
ME0048	5.0	1509												X											X					
ME0049	20	1512												X	45-29-30										X					
CCV	1.0	1522	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCB	1.0	1524	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0050	5.0	1526												X											X					
ME0051	5.0	1531																							X					
ME0053	2.0	1536																							X					
ME0054	2.0	1541										X		X																
ME0055	2.0	1545												X																
ME0056	2.0	1549												X																
ME0059	2.0	1553																							X					
CRI	1.0	1557		X	X		X	X		X	X	X		X		X		X		X	X		X	X	X					
ICSA	1.0	1612	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ICSAB	1.0	1614	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCV	1.0	1616	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCB	1.0	1618	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0064	2.0	1620										X		X																
ME0057A	1.0	1641						X																						
CRI	1.0	1645		X	X		X	X		X	X	X		X		X		X		X	X		X	X	X					
ICSA	1.0	1647	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ICSAB	1.0	1650	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCV	1.0	1652	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCB	1.0	1654	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					

## USEPA - CLP

13-IN  
ANALYSIS RUN LOGLab Name CHEMTECH CONSULTING GROUPContract: EPW06047Lab Code: CHEMCase No.: 37407

NRAS No.: \_\_\_\_\_

SDG No.: ME0047Instrument ID: P2Analysis Method: PStart Date: 05/06/2008End Date: 05/06/2008

EPA Sample No.	D/F	Time	Analytes																									
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
S0	1.0	0811	X					X	X	X			X	X	X	X				X	X		X	X	X			
S	1.0	0813	X					X	X	X			X	X	X	X				X	X		X	X	X			
ICV	1.0	0819											X							X	X		X	X	X			
ICB	1.0	0822											X															
CRI	1.0	0825																										
ICSA	1.0	0832	X					X	X	X			X	X	X	X				X	X		X	X	X			
ICSAB	1.0	0834	X					X	X	X			X	X	X	X				X	X		X	X	X			
CCV	1.0	0838											X															
CCB	1.0	0840											X															
ZZZZZZ	1.0	0843																										
ZZZZZZ	1.0	0845																										
ZZZZZZ	1.0	0852																										
ZZZZZZ	1.0	0855																										
ZZZZZZ	5.0	0858																										
ZZZZZZ	1.0	0901																										
ZZZZZZ	1.0	0904																										
ZZZZZZ	1.0	0908																										
ZZZZZZ	1.0	0911																										
ZZZZZZ	1.0	0915																										
CCV	1.0	0929											X															
CCB	1.0	0931											X															
ZZZZZZ	1.0	0934																										
ZZZZZZ	1.0	0937																										
ZZZZZZ	5.0	0944																										
ZZZZZZ	5.0	0948																										
ZZZZZZ	25	0952																										
ZZZZZZ	5.0	0955																										
ZZZZZZ	5.0	1005																										
CRI	1.0	1019																										
ICSA	1.0	1026	X					X	X	X			X	X	X	X				X	X		X	X	X			
ICSAB	1.0	1028	X					X	X	X			X	X	X	X				X	X		X	X	X			
CCV	1.0	1039											X															
CCB	1.0	1041											X															

# 13-IN ANALYSIS RUN LOG

Start Date: 05/06/2008 End Date: 05/06/2008

EPA Sample No.	D/F	Time	Analytes																									
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
ZZZZZZ	1.0	1103																										
ZZZZZZ	1.0	1106																										
ZZZZZZ	1.0	1111																										
ZZZZZZ	1.0	1113																										
ZZZZZZ	5.0	1116																										
ZZZZZZ	1.0	1118																										
ZZZZZZ	1.0	1120																										
ZZZZZZ	1.0	1124																										
ZZZZZZ	1.0	1132																										
ZZZZZZ	1.0	1136																										
CCV	1.0	1145												X														
CCB	1.0	1147												X														
ZZZZZZ	1.0	1150																										
ZZZZZZ	1.0	1155																										
ZZZZZZ	1.0	1203																										
ZZZZZZ	1.0	1211																										
ZZZZZZ	1.0	1217																										
ZZZZZZ	5.0	1229																										
ZZZZZZ	2.0	1233																										
CRI	1.0	1236																										
ICSA	1.0	1259	X					X	X	X			X	X	X	X			X	X		X	X	X				
ICSAB	1.0	1301	X					X	X	X			X	X	X	X			X	X		X	X	X				
CCV	1.0	1304											X															
CCB	1.0	1306											X															
ZZZZZZ	2.0	1309																										
ME0048	2.0	1311											X							X		X						
ZZZZZZ	1.0	1412																		X		X						
CRI	1.0	1419																										
ICSA	1.0	1423	X					X	X	X			X	X	X	X			X	X		X	X	X				
ICSAB	1.0	1425	X					X	X	X			X	X	X	X			X	X		X	X	X				
CCV	1.0	1427											X															
CCB	1.0	1430											X															

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

ESD Central Regional Laboratory  
Data Tracking Form for Contract Samples

Sample Delivery Group: ME0047 CERCLIS No: ILN000509228

Case No: 37407 Site Name/Location: LAKE CALUMET Smelting (IL)

Contractor or EPA Lab: ChemTech Data User: IEPA

No. of Samples: 19 Date Sampled or Date Received: 14 May 08

Have Chain-of-Custody records been received? Yes ☒ No ☐

Have traffic reports or packing lists been received? Yes ☒ No ☐

If no, are traffic report or packing list numbers written on the Chain-of-Custody Record?

Yes ☐ No ☐

If no, which traffic report or packing list numbers are missing?

Are basic data forms in? Yes ☒ No ☐

No of samples claimed: 19 No. of samples received: \_\_\_\_\_

Received by: updavis Date: 14 May 08

Received by LSSS: updavis Date: 15 May 08

Review started: JA 5/19/08 5/20/08 Reviewer Signature: James Absten

Total time spent on review: 16 Date review completed: 5/22/08

Copied by: A. C. Harvey Date: May 28, 2008

Mailed to user by: updavis Date: 30 May 08

**DATA USER:**

Please fill in the blanks below and return this form to:

Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: \_\_\_\_\_ Date: \_\_\_\_\_

Data review received by: \_\_\_\_\_ Date: \_\_\_\_\_

Inorganic Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK
Organic Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK
Dioxin data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK
SAS Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK

**PROBLEMS:** Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Date: \_\_\_\_\_

ESAT Controlled Number: ESAT 5.17.00114 -pd 15 July 08

DATE: July 15, 2008

RECEIVED

JUL 21 2008

IEPA-BOL-FSRS

IEPA

Attn: Mr. Mark Wagner

1001 North Grand Avenue East

P.O. Box 19276

Springfield, IL 62794-9276

SITE NAME: Lake Calumet Smelting & Refining(IL)

<u>Case</u>	<u>Lab</u>	<u>Samples</u>	<u>SDG</u>	<u>Matrix</u>
37475	ChemTech	2	ME00JO	soil

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

**Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.**

Data Received by: \_\_\_\_\_ Date: \_\_\_\_\_

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

Received by Data Management Coordinator, CRL for file.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

FROM: **U.S. EPA - Region 5**  
Sylvia Griffin  
Central Regional Laboratory  
536 S. Clark, 10th Floor  
Chicago, IL 60605

Sent By: Pat Johnson  
Data Coordinator  
ESAT Region 5 **TechLaw**

Controlled Document

# ESAT5.15.00042

Regional Transmittal Form

aca  
7-15-08

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

DATE: 7/2/08

SUBJECT: Review of Data  
Received for review on 6/6/08

FROM: Stephen L. Ostrodka, Chief (SRT-4J)  
Superfund Field Services Section

TO: Data User: IEPA

We have reviewed the data by CADRE for the following case:

SITE NAME: lake Calumet Smelting & Refining (IL)

CASE NUMBER: 37475 SDG NUMBER: ME00J0

Number and Type of Samples: 2 soils

Sample Numbers: ME00J0-J1

Laboratory: ChemTech Consulting Hrs. for Review: H

Following are our findings:

41

CC: Howard Pham  
Region 5 TOPO  
Mail Code: SRT-4J



**Below is a summary of the out-of-control audits and the possible effects on the data for this case:**

Two (2) soil samples, numbered ME00J0 – J1, were collected on 5/15/2008. The lab received the samples on 5/16/2008 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using the CLP SOW ILM05.4 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

No raw data for percent solids was provided. Percent solids data were presented on a computer generated spreadsheet. Percent solids calculations used by the laboratory were rounded incorrectly for ME00J0. The value reported by the laboratory were rounded up when they should not have been. The incorrectly reported percent solids results can result in low biased sample results. The reported results were corrected on sample ME00J0 by this reviewer.

**1. HOLDING TIME:**

No defects were found.

**2. CALIBRATIONS:**

No defects were found for the calibration or the CRQL standard.

**3. BLANKS:**

No defects were found for the blanks.

**4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:**

The following inorganic samples are associated with a matrix spike recovery which is low (30-74%) indicating that sample results may be biased low. No post spike was required.

Hits are qualified "J-" and non-detects are qualified "UJ".

Silver

ME00J0, ME00J1

No defects were found for the laboratory control sample.

**5. LABORATORY AND FIELD DUPLICATE:**

No defects were found for the laboratory duplicate samples. No samples were identified as field duplicates.

**6. ICP ANALYSIS:**

The following inorganic samples are associated with an ICP serial dilution percent difference which is not in control.

Hits are qualified "J" and non-detects are qualified "UJ".

Potassium

ME00J0, ME00J1

The following inorganic samples are associated with negative sample results whose absolute values are greater than the CRQL, indicating interference.

Non-detects are qualified "R".

Silver

ME00J0, ME00J1

## 7. SAMPLE RESULTS:

The following inorganic samples have analyte concentrations reported above the method detection limit (MDL) but below the quantitation limit (CRQL).

Results are qualified "J".

Selenium

ME00J0, ME00J1

All data, except those qualified above, are acceptable.

### **CADRE ILM05.4 Data Qualifier Sheet**

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

## Analytical Results (Qualified Data)

Page 1 of 1

Case #: 37475

SDG : ME00J0

Site :

LAKE CALUMET SMELTING

Lab. :

CHEM

Reviewer :

James Abston

Date :

7/2/2008

Number of Soil Samples : 2

Number of Water Samples : 0

Sample Number :	ME00J0	ME00J1								
Sampling Location :	X124	X125								
Matrix :	Soil	Soil								
Units :	mg/Kg	mg/Kg								
Date Sampled :	5/15/2008	5/15/2008								
Time Sampled :										
%Solids :	74.8	82.5								
Dilution Factor :	1.0	1.0								
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	7850		7420							
ANTIMONY	53.7		170							
ARSENIC	56.6		36.4							
BARIUM	791		944							
BERYLLIUM	1.5		2.0							
CADMIUM	9.0		43.3							
CALCIUM	20900		17700							
CHROMIUM	50.5		108							
COBALT	22.2		13.4							
COPPER	707		741							
IRON	127000	J	94200	J						
LEAD	3130		10300							
MAGNESIUM	2780		2610							
MANGANESE	740		436							
MERCURY	5.7		0.55							
NICKEL	91.1		61.7							
POTASSIUM	1170	J	2130	J						
SELENIUM	2.5	J	1.4	J						
SILVER	1.3	R	1.2	R						
SODIUM	979		987							
THALLIUM	3.3	U	3.0	U						
VANADIUM	34.2		33.3							
ZINC	4920		1880							
CYANIDE	0.62	J	0.57	J						



USEPA Contract Laboratory Program  
Inorganic Traffic Report & Chain of Custody Record

Case No: 37475

DAS No:

SDG No:

ME00J0

L

Date Shipped: 5/15/2008	Chain of Custody Record	
Carrier Name: UPS	Relinquished By: <i>Ken Corkill</i> (Date / Time) 5-15-08/1200	Sampler Signature: <i>Ken Corkill</i> (Date / Time)
Airbill: 1Z6215892210083141		
Shipped to: ChemTech Consulting Group 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900		
	3	
	4	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
----------------------	-----------------	------------	----------------------	--------------------------------	------------------	--------------------------	--------------------	--

ME00J0 Soil/Sediment/ L/G ICP, Hg, CN (21) 5-304121 (Ice Only) (1) X124 S: 5/15/2008 11:30 E00J0  
Ken Corkill  
Soil/Sediment/ L/G ICP, Hg, CN (21) 5-304125 (Ice Only) (1) X125 S: 5/15/2008 11:30 E00J1  
Ken Corkill

ME00J1  
Soil/Sediment/  
Ken Corkill

Shipment for Case #402 Complete <i>Y</i> 5-15-08	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): <i>Ken Corkill</i>	Cooler Temperature Upon Receipt: <i>4°C</i>	Chain of Custody Seal Number: 82886
Analysis Key: ICP, Hg, CN = CLP ICP Metals, Hg, CN	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? <i>Y</i> Shipment Iced? <i>Y</i>

TR Number: 5-162075208-051508-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.  
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

**CHEMTECH**  
284 Sheffield Street  
Mountainside, NJ 07092

## **SDG NARRATIVE**

USEPA  
SDG # ME00J0  
CASE # 37475  
CONTRACT # EPW06047  
LAB NAME: CHEMTECH CONSULTING GROUP  
LAB CODE: CHEM  
CHEMTECH PROJECT #Z2699

### **A. Number of Samples and Date of Receipt**

2 Soil Samples were delivered to the laboratory intact on 05/16/08.

### **B. Parameters**

Test requested for Metals Full (by ICP-AES), Hg & Cn only.

### **C. Cooler Temp**

Indicator Bottle: Presence/Absence  
Cooler: 4°C

### **D. Detail Documentation (related to Sample Handling Shipping, Analytical Problem, Temp of Cooler etc):**

Issue: The TR/COC does not designate a sample for laboratory QC; however, per scheduling laboratory QC is required. The laboratory would like to select sample ME00J1 for laboratory QC.

### **E. Corrective Action taken for above:**

Resolution: In accordance with previous direction from Region 5, the laboratory will select a sample for laboratory QC as long as the sample is not a PE, blank, or rinsate sample. The laboratory will note the issue in the SDG Narrative, notify the SMO coordinator of the sample selected for laboratory QC, and proceed with the analysis of the samples. If the laboratory is not sure that the sample they selected is not a PE, blank, or rinsate sample, they will contact SMO and wait for a resolution. SMO will note that sample ME00J1 was selected for laboratory QC.

### **F. Analytical Techniques:**

All analyses were based on CLP Methodology by method ILM05.4



## **CHEMTECH**

**284 Sheffield Street**

**Mountainside, NJ 07092**

### **G. Calculation:**

Conversion of results from mg/L to mg/kg (Dry Weight Basis):

Calculation for ICP-AES:

$\text{Mg/Kg} = (\text{Result in mg/L for ICP-AES}) \times 1000 \times 100\% \text{ Solid} \times \text{Fraction of Sample Amount Taken in Prep.}$

Calculation for Hg:

$\text{Mg/Kg} = (\text{Result in Ug/L-ppb for Hg}) \times 100\% \text{ Solid} \times \text{Fraction of Sample Amount Taken in Prep}$

Calculation for CN:

$\text{Mg/Kg} = (\text{Result in Ug/L-ppb for Hg}) \times 100\% \text{ Solid} \times \text{Fraction of Sample Amount Taken in Prep}$

### **H. QA/ QC**

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements except for the Silver. Duplicate sample did meet requirements. Serial Dilution did meet requirements for the Potassium.

I certify that the data package is in compliance with the terms and conditions of the contract both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Signature \_\_\_\_\_

Name: Parveen Hasan

Date \_\_\_\_\_

Title: Project Manager

JUN 06 2008

USEPA - CLP

COVER PAGE

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047

Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0

SOW No.: ILM05.4

EPA Sample No.

ME00J0

ME00J1

ME00J1D

ME00J1S

Lab Sample ID

Z2699-01

Z2699-02

Z2699-03

Z2699-04

ICP-AES ICP-MS

Were ICP-AES and ICP-MS interelement corrections applied? (Yes/No) YES \_\_\_\_\_

Were ICP-AES and ICP-MS background corrections applied? (Yes/No) YES \_\_\_\_\_

If yes, were raw data generated before application of background corrections? (Yes/No) NO \_\_\_\_\_

Comments:

THE "E" QUALIFIERS ON FORM I AND VIII FOR POTASSIUM INDICATE CHEMICAL OR PHYSICAL INTERFERENCE EFFECTS, WHICH WERE SUSPECTED DURING THAT ELEMENT'S ANALYSES ONLY.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: \_\_\_\_\_

Date: 6/5/08

Name: PARVEEN HASAN

Title: EPA PROJECT MANAGER

COVER PAGE

ILM05.4

## USEPA - CLP

3-IN  
BLANKSLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum	200.000	U	200.000	U	200.000	U	200.000	U	20.000	U	P
Antimony	60.000	U	60.000	U	60.000	U	60.000	U	6.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Barium	200.000	U	200.000	U	200.000	U	200.000	U	20.000	U	P
Beryllium	5.000	U	5.000	U	5.000	U	5.000	U	0.500	U	P
Cadmium	5.000	U	5.000	U	5.000	U	5.000	U	0.500	U	P
Calcium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Chromium	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Cobalt	50.000	U	50.000	U	50.000	U	50.000	U	5.000	U	P
Copper	25.000	U	25.000	U	25.000	U	-0.985	J	2.500	U	P
Iron	100.000	U	100.000	U	100.000	U	-50.250	J	10.000	U	P
Lead	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Magnesium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Manganese	15.000	U	15.000	U	15.000	U	15.000	U	1.500	U	P
Mercury	-0.084	J	0.200	U	0.200	U			0.100	U	CV
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	4.000	U	P
Potassium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Selenium	35.000	U	35.000	U	35.000	U	35.000	U	3.500	U	P
Silver	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Sodium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Thallium	25.000	U	25.000	U	25.000	U	25.000	U	2.500	U	P
Vanadium	50.000	U	50.000	U	50.000	U	50.000	U	5.000	U	P
Zinc	60.000	U	60.000	U	60.000	U	60.000	U	6.000	U	P
Cyanide	10.000	U	10.000	U	10.000	U			2.500	U	AS

### 3-IN BLANKS

Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0

Preparation Blank Concentration Units (ug/L or mg/kg): \_\_\_\_\_

[illegible]

## USEPA - CLP

4A-IN

## ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000	235000	96	238000	99	237000	97	241000	100
Antimony	0	589	-3.1		628	107	-10.4		614	104
Arsenic	0	101	-8.3		97.4	96	-9.2		92.0	91
Barium	2.0	495	2.5	125	548	111	2.7	135	541	109
Beryllium	0	475	0.86		496	104	0.83		495	104
Cadmium	0	940	-2.2		1010	107	-3.7		991	105
Calcium	235000	231000	235000	100	236000	102	235000	100	239000	103
Chromium	43.0	511	44.6	104	547	107	45.0	105	553	108
Cobalt	4.0	461	4.5	113	490	106	4.4	110	489	106
Copper	23.0	548	17.5	76	537	98	18.4	80	541	99
Iron	95600	94800	96500	101	97700	103	94800	99	96900	102
Lead	10.0	61.0	11.5	115	63.6	104	8.2	82	61.0	100
Magnesium	248000	251000	252000	102	254000	101	253000	102	257000	102
Manganese	19.0	502	20.4	107	527	105	19.7	104	531	106
Nickel	21.0	984	22.2	106	1020	104	20.5	98	1010	103
Potassium	0	0	6.6		7.5		11.1		15.5	
Selenium	0	53.0	-3.4		50.1	95	-3.8		48.0	91
Silver	0	206	-7.2		210	102	-8.8		205	100
Sodium	0	0	1010		1050		1220		1220	
Thallium	0	103	2.4		101	98	-6.0		96.8	94
Vanadium	0	494	-11.1		515	104	-12.5		498	101
Zinc	28.0	1030	44.4	159	1020	99	43.3	155	1060	103

## USEPA - CLP

4A-IN  
ICP-AES INTERFERENCE CHECK SAMPLELab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000					221000	91	222000	92
Antimony	0	589					-11.1		579	98
Arsenic	0	101					-7.1		90.6	90
Barium	2.0	495					2.3	115	514	104
Beryllium	0	475					0.90		475	100
Cadmium	0	940					-3.7		960	102
Calcium	235000	231000					224000	95	224000	97
Chromium	43.0	511					43.0	100	515	101
Cobalt	4.0	461					4.0	100	463	100
Copper	23.0	548					16.7	73	495	90
Iron	95600	94800					92300	97	92800	98
Lead	10.0	61.0					8.4	84	55.7	91
Magnesium	248000	251000					240000	97	240000	96
Manganese	19.0	502					18.5	97	496	99
Nickel	21.0	984					19.6	93	973	99
Potassium	0	0					9.3		10.2	
Selenium	0	53.0					-0.91		46.5	88
Silver	0	206					-7.7		195	95
Sodium	0	0					996		1050	
Thallium	0	103					-3.8		87.8	85
Vanadium	0	494					-11.9		479	97
Zinc	28.0	1030					40.9	146	978	95

## USEPA - CLP

5A-IN  
MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME00J1S

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0Matrix: (soil/water) SOIL Level: (low/med) LOW% Solids for Sample: 82.5Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony		190.2552	170.0345	24.24	83		P
Arsenic	75-125	45.4588	36.4479	9.70	93		P
Barium	75-125	1430.3291	943.6352	484.85	100		P
Beryllium	75-125	14.1558	1.9606	12.12	101		P
Cadmium	75-125	54.6939	43.2830	12.12	94		P
Calcium							NR
Chromium	75-125	154.2739	107.5952	48.48	96		P
Cobalt	75-125	134.6836	13.3679	121.21	100		P
Copper		775.7552	740.8533	60.61	58		P
Iron							NR
Lead		9948.0624	10296.9764	4.85	-7194		P
Magnesium							NR
Manganese	75-125	540.1909	435.9158	121.21	86		P
Mercury	75-125	1.1697	0.5533	0.61	101		CV
Nickel	75-125	183.6418	61.7236	121.21	101		P
Potassium							NR
Selenium	75-125	12.7424	1.4491	12.12	93		P
Silver	75-125	6.6285	1.2121	12.12	55	N	P
Sodium							NR
Thallium	75-125	10.8630	3.0303	12.12	90		P
Vanadium	75-125	166.6109	33.3285	121.21	110		P
Zinc		1908.1915	1876.3370	121.21	26		P
Cyanide	75-125	7.4724	0.5683	6.06	114		AS

Comments:

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USEPA - CLP

6-IN  
DUPLICATES

EPA SAMPLE NO.

ME00J1D

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0Matrix: (soil/water) SOIL Level: (low/med) LOW% Solids for Sample: 82.5 % Solids for Duplicate: 80.2Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)		Duplicate (D)		RPD	Q	M
			C		C			
Aluminum		7421.9164		7346.9418		1		P
Antimony		170.0345		169.1473		1		P
Arsenic		36.4479		36.3176		0		P
Barium		943.6352		936.5000		1		P
Beryllium	0.6	1.9606		1.9479		1		P
Cadmium		43.2830		43.0721		0		P
Calcium		17661.9533		17539.1036		1		P
Chromium		107.5952		106.8200		1		P
Cobalt	6.1	13.3679		13.2558		1		P
Copper		740.8533		732.7127		1		P
Iron		94244.1273		93445.3636		1		P
Lead		10296.9764		10249.2358		0		P
Magnesium	606.1	2607.5479		2587.5006		1		P
Manganese		435.9158		432.0745		1		P
Mercury	0.1	0.5533		0.5903		6		CV
Nickel		61.7236		61.5194		0		P
Potassium	606.1	2126.6212		2113.8818		1		P
Selenium		1.4491	J	1.2370	J	16		P
Silver		1.2121	U	1.2121	U			P
Sodium	606.1	986.7897		962.9139		2		P
Thallium		3.0303	U	3.0303	U			P
Vanadium		33.3285		32.9970		1		P
Zinc		1876.3370		1858.4988		1		P
Cyanide		0.5683	J	0.5735	J	1		AS

## USEPA - CLP

8-IN  
ICP-AES and ICP-MS SERIAL DILUTIONS

EPA SAMPLE NO.

ME00J1L

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0Matrix: (soil/water) SOIL Level: (low/med) LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I) C		Serial Dilution Result (S) C		% Difference	Q	M
Aluminum	61230.81		63252.45		3		P
Antimony	1402.79		1455.85		4		P
Arsenic	300.70		296.73		1		P
Barium	7784.99		8076.68		4		P
Beryllium	16.18		17.65	J	9		P
Cadmium	357.09		378.48		6		P
Calcium	145711.12		158494.58		9		P
Chromium	887.66		930.53		5		P
Cobalt	110.29		115.15	J	4		P
Copper	6112.04		5984.73		2		P
Iron	155502.81		149002.93		4		P
Lead	84950.06		89333.95		5		P
Magnesium	21512.27		23493.35	J	9		P
Manganese	3596.31		3807.38		6		P
Nickel	509.22		539.28		6		P
Potassium	17544.63		14556.55	J	17	E	P
Selenium	11.96	J	175.00	U	100		P
Silver	10.00	U	50.00	U			P
Sodium	8141.02		7579.50	J	7		P
Thallium	25.00	U	125.00	U			P
Vanadium	274.96		266.10		3		P
Zinc	15479.78		16803.93		9		P

## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0Instrument Type: AS Instrument ID: CN Date: 01/15/2008Preparation Method: DS2Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		20	
Antimony		6	
Arsenic		1	
Barium		20	
Beryllium		0.5	
Cadmium		0.5	
Calcium		500	
Chromium		1	
Cobalt		5	
Copper		2.5	
Iron		10	
Lead		1	
Magnesium		500	
Manganese		1.5	
Mercury		0.1	
Nickel		4	
Potassium		500	
Selenium		3.5	
Silver		1	
Sodium		500	
Thallium		2.5	
Vanadium		5	
Zinc		6	
Cyanide	578.00	2.5	0.020

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0Instrument Type: AS Instrument ID: CN Date: 01/15/2008Preparation Method: NP1Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		200	
Antimony		60	
Arsenic		10	
Barium		200	
Beryllium		5	
Cadmium		5	
Calcium		5000	
Chromium		10	
Cobalt		50	
Copper		25	
Iron		100	
Lead		10	
Magnesium		5000	
Manganese		15	
Mercury		0.2	
Nickel		40	
Potassium		5000	
Selenium		35	
Silver		10	
Sodium		5000	
Thallium		25	
Vanadium		50	
Zinc		60	
Cyanide	578.00	10	2.1

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0Instrument Type: CV Instrument ID: CV2 Date: 01/15/2008Preparation Method: CS1Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		20	
Antimony		6	
Arsenic		1	
Barium		20	
Beryllium		0.5	
Cadmium		0.5	
Calcium		500	
Chromium		1	
Cobalt		5	
Copper		2.5	
Iron		10	
Lead		1	
Magnesium		500	
Manganese		1.5	
Mercury	253.70	0.1	0.038
Nickel		4	
Potassium		500	
Selenium		3.5	
Silver		1	
Sodium		500	
Thallium		2.5	
Vanadium		5	
Zinc		6	
Cyanide		2.5	

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0Instrument Type: P Instrument ID: P2 Date: 01/15/2008Preparation Method: HS1Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.20	20	2.4
Antimony	206.80	6	0.78
Arsenic	189.00	1	0.46
Barium	493.40	20	1.0
Beryllium	313.00	0.5	0.030
Cadmium	226.50	0.5	0.13
Calcium	317.90	500	29.4
Chromium	267.70	1	0.14
Cobalt	228.60	5	0.53
Copper	324.70	2.5	0.17
Iron	271.40	10	3.5
Lead	220.40	1	0.41
Magnesium	279.00	500	3.7
Manganese	257.60	1.5	0.11
Mercury		0.1	
Nickel	231.60	4	0.64
Potassium	766.50	500	2.1
Selenium	196.00	3.5	0.68
Silver	328.00	1	0.13
Sodium	330.20	500	69.4
Thallium	190.90	2.5	0.44
Vanadium	292.40	5	0.79
Zinc	206.20	6	1.0
Cyanide		2.5	

Comments:


## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0Instrument Type: P Instrument ID: P2 Date: 01/15/2008Preparation Method: NP1Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.20	200	29.9
Antimony	206.80	60	9.3
Arsenic	189.00	10	3.8
Barium	493.40	200	8.9
Beryllium	313.00	5	0.40
Cadmium	226.50	5	1.4
Calcium	317.90	5000	187
Chromium	267.70	10	1.8
Cobalt	228.60	50	3.4
Copper	324.70	25	0.90
Iron	271.40	100	15.3
Lead	220.40	10	3.8
Magnesium	279.00	5000	175
Manganese	257.60	15	1.2
Mercury		0.2	
Nickel	231.60	40	4.5
Potassium	766.50	5000	158
Selenium	196.00	35	5.8
Silver	328.00	10	1.8
Sodium	330.20	5000	655
Thallium	190.90	25	9.2
Vanadium	292.40	50	6.4
Zinc	206.20	60	6.0
Cyanide		10	

Comments:

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## USEPA - CLP

# 12-IN PREPARATION LOG

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047

Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0

Preparation Method: CS1[illegible]

## USEPA - CLP

## 12-IN PREPARATION LOG

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047

Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0Preparation Method: DS2[illegible]

USEPA - CLP  
12-IN  
PREPARATION LOG

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047

Lab Code: CHEM Case No.: 37475 NRAS No.: \_\_\_\_\_ SDG No.: ME00J0

Preparation Method: HS1[illegible]



# 13-IN ANALYSIS RUN LOG

Contract: EPW06047

Case No.: 37475

NRAS No.:

SDG No.: ME00J0

Analysis Method: AS

Start Date: 05/22/2008

End Date: 05/22/200840

## USEPA - CLP

13-IN  
ANALYSIS RUN LOGLab Name: CHEMTECH CONSULTING GROUPContract: EPW06047Lab Code: CHEMCase No.: 37475

NRAS No.: \_\_\_\_\_

SDG No.: ME00J0Instrument ID: P2Analysis Method: PStart Date: 05/23/2008End Date: 05/23/2008

EPA Sample No.	D/F	Time	Analytes																					
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V
S0	1.0	1155	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
S	1.0	1158	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICV	1.0	1204	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICB	1.0	1206	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CRI	1.0	1208		X	X		X	X		X	X	X		X		X		X		X	X		X	X
ICSA	1.0	1215	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICSAB	1.0	1217	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCV	1.0	1221	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCB	1.0	1223	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
PBS	1.0	1225	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
LCSS	1.0	1228	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ME00J0	1.0	1245	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X
ME00J1	1.0	1247	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X
ME00J1D	1.0	1250	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X
ME00J1L	5.0	1254	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X
ME00J1S	1.0	1256		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X
ME00J0	5.0	1304										X												
ME00J1	5.0	1306										X												
ME00J1D	5.0	1309										X												
CCV	1.0	1324	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCB	1.0	1326	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ME00J1L	25	1328										X												
ME00J1S	5.0	1333																						
ZZZZZZ	1.0	1335																						
ZZZZZZ	1.0	1338																						
ZZZZZZ	1.0	1341																						
ZZZZZZ	1.0	1343																						
ZZZZZZ	1.0	1345																						
CRI	1.0	1354		X	X		X	X		X	X	X		X		X		X		X	X		X	X
ICSA	1.0	1400	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICSAB	1.0	1402	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCV	1.0	1404	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCB	1.0	1406	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X

# 13-IN ANALYSIS RUN LOG

Contract: EPW06047

Case No.: 37475

NRAS No.: \_\_\_\_\_

SDG No.: ME00J0

### Analysis Method: P

Start Date: 05/23/2008

End Date: 05/23/2008

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## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## REGION V

## ESD Central Regional Laboratory

## Data Tracking Form for Contract Samples

Sample Delivery Group: MEDOTO CERCLIS No: ILD000509228Case No: 37475 Site Name/Location: LAKE CALUMET SMELTING & REFINING (IL)Contractor or EPA Lab: ChemTech Data User: EPANo. of Samples: 2 Date Sampled or Date Received: 6 June 08Have Chain-of-Custody records been received? Yes ☒ No ☐Have traffic reports or packing lists been received? Yes ☒ No ☐

If no, are traffic report or packing list numbers written on the Chain-of-Custody Record?

Yes ☐ No ☐

If no, which traffic report or packing list numbers are missing?

Are basic data forms in? Yes ☒ No ☐No of samples claimed: 2 No. of samples received: \_\_\_\_\_Received by: pdavis Date: 6 June 08Received by LSSS: pdavis Date: 8 June 08Review started: 6/25/08 Reviewer Signature: James A. [Signature]Total time spent on review: 4 Date review completed: 7/2/08Copied by: A. C. Harvey <sup>+1 w 7-15-08</sup> Date: July 15, 2008

Mailed to user by: \_\_\_\_\_ Date: \_\_\_\_\_

**DATA USER:**

Please fill in the blanks below and return this form to:

Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: \_\_\_\_\_ Date: \_\_\_\_\_

Data review received by: \_\_\_\_\_ Date: \_\_\_\_\_

Inorganic Data Complete ☐ Suitable for Intended Purpose ☒ if OKOrganic Data Complete ☐ Suitable for Intended Purpose ☒ if OKDioxin data Complete ☐ Suitable for Intended Purpose ☒ if OKSAS Data Complete ☐ Suitable for Intended Purpose ☒ if OK**PROBLEMS:** Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Date: \_\_\_\_\_

# ESAT5.16.00026UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
SUPERFUND DIVISIONack  
6-17-08

DATE:

SUBJECT: Review of Data  
Received for Review on: 5/19/2008FROM: Stephen L. Ostrodka, Chief (SRT-4J)  
Superfund Field Services Section*Per Steve Ostrodka  
Richard L Byrd  
6/16/08*TO: Data User: IEPA

We have reviewed the data for the following case:

SITE Name: Lake Calumet Smelting & Refining (IL)Case Number: 37407SDG Number: E0066Number and Type of Samples: 6 Water Samples (Low Level Volatiles / Semivolatiles /  
Pesticides / Aroclors)Sample Numbers: E0066, E0070, E0071, E0080, E0081, E0084Laboratory: Kap Technologies

Hrs for Review:

Following are our findings:

*the data are reliable and acceptable with the  
qualifications discussed in the attached narrative  
Richard L Byrd*CC: Howard Pham  
Region 5 TPO  
Mail Code: SRT-4J**RECEIVED**

JUN 23 2008

IEPA-BOL-FSRS

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

Page 2 of 10  
SDG Number: E0066  
Laboratory: Kap Technologies

**Below is a summary of the out-of-control audits and the possible effects on the data for this case:**

Six (6) preserved water samples labeled E0066, E0070, E0071, E0080, E0081, and E0084 were shipped to Kap Technologies located in The Woodlands, TX. All samples were collected between 4/22/2008 and 4/24/2008 and received between 4/23/2008 and 4/25/2008 intact and properly cooled. All samples were analyzed for the low level volatile target compounds. Samples E0066, E0071, E0080, and E0081 were analyzed for the semivolatile, pesticide, and aroclor target compounds. All samples were analyzed according to CLP SOW SOM01.2 and reviewed according to the NFG for SOM01.1 and the SOP for ESAT 5/TechLaw Validation of Contract Laboratory Program Organic Data (Version 2.1).

Sample E0066 was designated by the samplers to be used for laboratory QC, i.e. matrix spike / matrix spike duplicate analyses.

Samples E0070 and E0084 were identified as trip blanks.

Sample E0071 was identified as a field blank.

No samples were identified as field duplicates.

**RECEIVED**

JUN 23 2008

**IEPA-BOL-FSRS**

Reviewed by: Christina Steinbuck / TechLaw-ESAT  
Date: 6/12/2008

**1. HOLDING TIME**

No problems were found.

**2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE**

No problems were found.

**3. CALIBRATION**

The following low level volatile water samples are associated with an initial calibration with a percent relative standard deviation (%RSD) that exceeded the criteria of 20%. The detected compound is qualified "J". The non-detected compounds are qualified "UJ".

Toluene

E0066, E0066MS, E0066MSD, E070, E0071, E0080, E0081, E0084, VBLK32, VBLK40

1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

E0066, E0066MS, E0066MSD, E070, E0071, VBLK32

The following low level volatile water samples are associated with an initial calibration in which a DMC did not meet percent relative standard deviation (%RSD) criteria. Sample results are not qualified based on the DMC %RSD or RRF data alone.

1,1-Dichloroethene-d2

E0080, E0081, E0084, VBLK40, VBLK51, VHBLK01

**4. BLANKS**

The following low level volatile water samples have common contaminant analyte concentrations reported less than the CRQL. The associated method blank concentration has common contaminant analyte concentration less than 2X the CRQL. Detected compounds are qualified "U". Non-detected compounds are not qualified. Reported sample concentrations have been elevated to the CRQL.

Methylene chloride

E0080, E0081, E0084

The following low level volatile water samples have common contaminant analyte concentrations reported at or greater than the CRQL and less than 10X the method blank concentration. The associated method blank concentration has common contaminant analyte concentration less than 2X the CRQL. Detected compounds are qualified "U". Non-detected compounds are not qualified. Sample concentrations have been reported as the adjusted CRQL.



Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0066  
Laboratory: Kap Technologies

Methylene chloride  
E0066, E0066MS, E0066MSD, E0070, E0071

The following low level volatile water samples have analyte concentrations reported less than the CRQL. The associated method blank concentration has analyte concentration less than the CRQL. Detected compounds are qualified "UJ" because all initial calibration criteria was not met. Non-detected compounds are not qualified. Reported sample concentrations have been elevated to the CRQL.

Toluene  
E0066, E0070, E0071, E0081, E0084

The following low level volatile water samples have TIC concentrations reported less than 5X the method blank concentration. Detected compounds are qualified "U" and deleted from the TIC report.

E0066, E0070, E0071, VHBLK01

The following low level volatile water samples have TIC concentrations reported less than 5X the trip blank concentration. Detected compounds are qualified "U" and deleted from the TIC report.

E0080, E0081

## **5. DEUTERATED MONITORING COMPOUND AND SURROGATE RECOVERY**

The following low level volatile water samples have DMC/SMC recoveries above the upper limit of the criteria window. The compounds were not detected in any of the samples. The non-detected compounds are not qualified for this criterion.

E0066, E0066MSD, E0070, E0071  
Dichlorodifluoromethane, Chloromethane, Bromomethane, Chloroethane, Carbon disulfide

The following low level volatile water samples have one or more DMC/SMC recovery values less than the primary lower limit but greater than or equal to 20%. The compounds were not detected in any of the samples. The non-detected compounds are qualified "UJ".

E0080, E0081  
Dichlorodifluoromethane, Chloromethane, Bromomethane, Chloroethane, Carbon disulfide

The following semivolatile water samples have deuterated monitoring compound recovery below the lower limit of the criteria window but greater than or equal to 0%. The compounds were not detected in any of the samples. The non-detected compounds are qualified "UJ".

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0066  
Laboratory: Kap Technologies

E0066

Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene

E0066MS

4-Chloroaniline, Hexachlorocyclopentadiene, 3,3'-Dichlorobenzidine

The following pesticide water samples have two or more surrogate recoveries greater than 150%. The detected compounds in E0066MSD are qualified "J". Non-detected compounds are not qualified for this criterion.

E0066, E0066MSD, E0071

The following pesticide water samples have only one surrogate recovery value outside the acceptance criteria. Results are only qualified if two or more surrogate recoveries are outside the acceptance criteria. Detected and non-detected compounds are not qualified.

E0066MS, PBLK58

#### **6A. MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

Sample E0066 was designated by the samplers to be used for laboratory QC, i.e. matrix spike / matrix spike duplicate analyses.

The following low level volatile water matrix spike/matrix spike duplicate samples have percent recovery less than the lower limit but greater than 20%. The detected compound in the unspiked sample, E0066, is qualified "J".

E0066MS, E0066MSD

Benzene

The following pesticide water matrix spike/matrix spike duplicate samples have percent recovery greater than the upper acceptance criteria. The compounds were not detected in the unspiked sample, E0066. Non-detected compounds in the unspiked sample, E0066, are not qualified for this criterion.

E0066MS, E0066MSD

Heptachlor, Aldrin, Dieldrin, Endrin

E0066MSD

gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, Endrin, 4,4'-DDT

The following pesticide water matrix spike/matrix spike duplicate sample has percent recovery greater than the upper acceptance criteria on only 1 GC column. Detected and non-detected

Reviewed by: Christina Steinbuck / TechLaw-ESAT

Date: 6/12/2008

Case Number: 37407  
Site Name: Lake Calumet Smelting & Refining (IL)

SDG Number: E0066  
Laboratory: Kap Technologies

compounds are not qualified as the lower of the 2 possible values (i.e. the reported value) is within the acceptance range.

E0066MS  
gamma-BHC (Lindane), 4,4'-DDT

The relative percent difference (RPD) between the following pesticide water matrix spike and matrix spike duplicate recoveries is outside criteria on only 1 GC column. Detected and non-detected compounds are not qualified as the lower of the 2 possible values (i.e. the reported value) is within the acceptance range.

E0066MS, E0066MSD  
gamma-BHC (Lindane), Endrin, 4,4'-DDT

The following aroclor water matrix spike/matrix spike duplicate samples have percent recovery greater than the upper acceptance criteria. The compounds were not detected in the unspiked sample, E0066. Non-detected compounds in the unspiked sample, E0066, are not qualified for this criterion.

E0066MS, E0066MSD  
Aroclor-1016

The following aroclor water matrix spike/matrix spike duplicate samples have percent recovery greater than the upper acceptance criteria on only 1 GC column. Detected and non-detected compounds are not qualified as the lower of the 2 possible values (i.e. the reported value) is within the acceptance range.

E0066MS, E0066MSD  
Aroclor-1260

#### **6B. LABORATORY CONTROL SAMPLE**

No problems were found.

#### **7. FIELD BLANK AND FIELD DUPLICATE**

Two samples, E0070 and E0084, were identified as trip blanks. Results are summarized in the following table:

	E0084
Low Level Volatile analytes:	
Number of TICs	1

Sample E0071 was identified as a field blank. No problems were found.



Case Number: 37407

SDG Number: E0066

Site Name: Lake Calumet Smelting &amp; Refining (IL)

Laboratory: Kap Technologies

No samples were identified as field duplicates. Results are not qualified based upon the results of the field duplicates.

## 8. INTERNAL STANDARDS

No problems were found.

## 9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all low level volatile, semivolatile, pesticide, and aroclor compounds were properly identified.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following low level volatile water samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified "J".

VBLK32

Toluene

VBLK40

Methylene chloride, Toluene

The following pesticide water sample has analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified "J".

PLCS58

gamma-BHC (Lindane), 4,4'-DDE

The relative percent difference between analyte results for the following pesticide water samples is greater than 25%. The analyte concentrations are greater than 25% of the CRQL. Detected compounds are qualified "J".

E0066MS

gamma-BHC (Lindane), Heptachlor, Endrin

E0066MSD

Heptachlor, Dieldrin

The relative percent difference between analyte results for the following aroclor water sample is greater than 25%. The analyte concentrations are greater than 25% of the CRQL. Detected compounds are qualified "J".

E0066MSD

Aroclor-1016, Aroclor1260

Reviewed by: Christina Steinbuck / TechLaw-ESAT

Date: 6/12/2008

## 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baseline for the pesticide and aroclor analyses was acceptable.

## 12. ADDITIONAL INFORMATION

The CADRE and EDD spreadsheets did not include the following pesticide and aroclor samples. Form Is for these samples are included with the hard copy data package.

ALCS57, PLCS58

Sample E0084 was incorrectly labeled E0082 on the low level volatile Form Is. The reviewer corrected the Form Is.

The following pesticide water samples have analyte concentrations which exceed the instruments calibration range. The detected results are qualified "J". No dilution was required because these are laboratory QC samples.

E0066MS  
Heptachlor, Aldrin

E0066MSD  
Heptachlor, Aldrin, Endrin

The following pesticide water samples have analyte concentrations which exceed the instruments calibration range on only 1 GC column. Detected and non-detected compounds are not qualified as the lower of the 2 possible values (i.e. the reported value) is within the acceptance range.

E0066MS  
Dieldrin, Endrin

E0066MSD  
gamma-BHC (Lindane), Dieldrin

The following aroclor water samples have analyte concentrations which exceed the instruments calibration range. The detected results are qualified "J". No dilution was required because these are laboratory QC samples.

E0066MS, E0066MSD  
Aroclor-1016

A review of the chromatograms for the pesticide and aroclor analyses indicate that the laboratory may have mis-integrated the concentrations of the spiking compound in the MS, MSD, and the

Case Number: 37407

SDG Number: E0066

Site Name: Lake Calumet Smelting & Refining (IL)

Laboratory: Kap Technologies

unspiked source sample, E0066. All 6 analyses show an 'unidentified' peak at a retention time between 12.00 and 18.00. Copies of the associated Quantitation reports (pesticides pp 483, 484, 577, 578, 581 and 582; aroclors pp 632, 633, 719, 720, 723 and 724) are included with the hardcopy validation package.

CADRE Data Qualifier Sheet

Qualifiers

Data Qualifier Definitions

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present.)

## Analytical Results (Qualified Data)

Page 1 of 14

Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Number of Soil Samples : 0

Lab. :

KAP

Number of Water Samples : 6

Reviewer :

Number of Sediment Samples : 0

Date :

Sample Number :	E0066		E0066MS		E0066MSD		E0070		E0071	
Sampling Location :	G101		G101		G101		TB101		FB101	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	4/22/2008						4/23/2008		4/23/2008	
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	2		2		2		2		2	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Vinyl chloride	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromomethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Trichlorofluoromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1-Dichloroethene	5.0	U	31		31		5.0	U	5.0	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Methyl acetate	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Methylene chloride	7.3	U	6.0	U	5.0	U	5.5	U	5.5	U
trans-1,2-Dichloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Methyl tert-butyl ether	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1-Dichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
cis-1,2-Dichloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Butanone	10	U	10	U	10	U	10	U	10	U
Bromochloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chloroform	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,1-Trichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cyclohexane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Carbon tetrachloride	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Benzene	5.5	J	42		43		5.0	U	5.0	U
1,2-Dichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,4-Dioxane	100	U	100	U	100	U	100	U	100	U
Trichloroethene	5.0	U	42		42		5.0	U	5.0	U
Methylcyclohexane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dichloropropane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromodichloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
cis-1,3-Dichloropropene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methyl-2-pentanone	10	U	10	U	10	U	10	U	10	U
Toluene	5.0	UJ	48	J	50	J	5.0	UJ	5.0	UJ
trans-1,3-Dichloropropene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U

## Analytical Results (Qualified Data)

Page 2 of 14

Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0066	E0066MS	E0066MSD	E0070	E0071					
Sampling Location :	G101	G101	G101	TB101	FB101					
Matrix :	Water	Water	Water	Water	Water					
Units :	ug/L	ug/L	ug/L	ug/L	ug/L					
Date Sampled :	4/22/2008			4/23/2008	4/23/2008					
Time Sampled :										
%Moisture :	N/A	N/A	N/A	N/A	N/A					
pH :	2	2	2	2	2					
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Tetrachloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Hexanone	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dibromoethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chlorobenzene	5.0	U	49		50		5.0	U	5.0	U
Ethylbenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
o-Xylene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
m,p-Xylene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Styrene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromoform	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Isopropylbenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,2,2-Tetrachloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,3-Dichlorobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,4-Dichlorobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dichlorobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dibromo-3-chloropropane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2,4-Trichlorobenzene	5.0	UJ	5.0	UJ	5.0	UJ	5.0	UJ	5.0	UJ
1,2,3-Trichlorobenzene	5.0	UJ	5.0	UJ	5.0	UJ	5.0	UJ	5.0	UJ

Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0080		E0081		E0084		VBLK32		VBLK40	
Sampling Location :	G102		G103		TB102					
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	4/23/2008		4/23/2008		4/24/2008					
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	2		2		2					
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0	UJ	5.0	UJ	5.0	U	5.0	U	5.0	U
Chloromethane	5.0	UJ	5.0	UJ	5.0	U	5.0	U	5.0	U
Vinyl chloride	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromomethane	5.0	UJ	5.0	UJ	5.0	U	5.0	U	5.0	U
Chloroethane	5.0	UJ	5.0	UJ	5.0	U	5.0	U	5.0	U
Trichlorofluoromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1-Dichloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	5.0	UJ	5.0	UJ	5.0	U	5.0	U	5.0	U
Methyl acetate	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Methylene chloride	5.0	U	5.0	U	5.0	U	5.7		2.8	J
trans-1,2-Dichloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Methyl tert-butyl ether	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1-Dichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
cis-1,2-Dichloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Butanone	10	U	10	U	10	U	10	U	10	U
Bromochloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chloroform	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,1-Trichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cyclohexane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Carbon tetrachloride	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Benzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,4-Dioxane	100	U	100	U	100	U	100	U	100	U
Trichloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Methylcyclohexane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dichloropropane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromodichloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
cis-1,3-Dichloropropene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methyl-2-pentanone	10	U	10	U	10	U	10	U	10	U
Toluene	5.0	UJ	5.0	UJ	5.0	UJ	4.6	J	3.8	J
trans-1,3-Dichloropropene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U



## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0080		E0081		E0084		VBLK32		VBLK40	
Sampling Location :	G102		G103		TB102					
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	4/23/2008		4/23/2008		4/24/2008					
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	2		2		2					
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Tetrachloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Hexanone	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dibromoethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chlorobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Ethylbenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
o-Xylene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
m,p-Xylene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Styrene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromoform	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Isopropylbenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,2,2-Tetrachloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,3-Dichlorobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,4-Dichlorobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dichlorobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dibromo-3-chloropropane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2,4-Trichlorobenzene	5.0	U	5.0	U	5.0	U	5.0	UJ	5.0	U
1,2,3-Trichlorobenzene	5.0	U	5.0	U	5.0	U	5.0	UJ	5.0	U

## Analytical Results (Qualified Data)

Page 5 of 14

Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	VBLK51		VHBLK01							
Sampling Location :										
Matrix :	Water		Water							
Units :	ug/L		ug/L							
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A							
pH :										
Dilution Factor :	1.0		1.0							
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0	U	5.0	U						
Chloromethane	5.0	U	5.0	U						
Vinyl chloride	5.0	U	5.0	U						
Bromomethane	5.0	U	5.0	U						
Chloroethane	5.0	U	5.0	U						
Trichlorofluoromethane	5.0	U	5.0	U						
1,1-Dichloroethene	5.0	U	5.0	U						
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	U						
Acetone	10	U	10	U						
Carbon disulfide	5.0	U	5.0	U						
Methyl acetate	5.0	U	5.0	U						
Methylene chloride	5.0	U	5.0	U						
trans-1,2-Dichloroethene	5.0	U	5.0	U						
Methyl tert-butyl ether	5.0	U	5.0	U						
1,1-Dichloroethane	5.0	U	5.0	U						
cis-1,2-Dichloroethene	5.0	U	5.0	U						
2-Butanone	10	U	10	U						
Bromochloromethane	5.0	U	5.0	U						
Chloroform	5.0	U	5.0	U						
1,1,1-Trichloroethane	5.0	U	5.0	U						
Cyclohexane	5.0	U	5.0	U						
Carbon tetrachloride	5.0	U	5.0	U						
Benzene	5.0	U	5.0	U						
1,2-Dichloroethane	5.0	U	5.0	U						
1,4-Dioxane	100	U	100	U						
Trichloroethene	5.0	U	5.0	U						
Methylcyclohexane	5.0	U	5.0	U						
1,2-Dichloropropane	5.0	U	5.0	U						
Bromodichloromethane	5.0	U	5.0	U						
cis-1,3-Dichloropropene	5.0	U	5.0	U						
4-Methyl-2-pentanone	10	U	10	U						
Toluene	5.0	U	5.0	U						
trans-1,3-Dichloropropene	5.0	U	5.0	U						

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	VBLK51		VHBLK01							
Sampling Location :										
Matrix :	Water		Water							
Units :	ug/L		ug/L							
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A							
pH :										
Dilution Factor :	1.0		1.0							
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0	U	5.0	U						
Tetrachloroethene	5.0	U	5.0	U						
2-Hexanone	10	U	10	U						
Dibromochloromethane	5.0	U	5.0	U						
1,2-Dibromoethane	5.0	U	5.0	U						
Chlorobenzene	5.0	U	5.0	U						
Ethylbenzene	5.0	U	5.0	U						
o-Xylene	5.0	U	5.0	U						
m,p-Xylene	5.0	U	5.0	U						
Styrene	5.0	U	5.0	U						
Bromoform	5.0	U	5.0	U						
Isopropylbenzene	5.0	U	5.0	U						
1,1,2,2-Tetrachloroethane	5.0	U	5.0	U						
1,3-Dichlorobenzene	5.0	U	5.0	U						
1,4-Dichlorobenzene	5.0	U	5.0	U						
1,2-Dichlorobenzene	5.0	U	5.0	U						
1,2-Dibromo-3-chloropropane	5.0	U	5.0	U						
1,2,4-Trichlorobenzene	5.0	U	5.0	U						
1,2,3-Trichlorobenzene	5.0	U	5.0	U						

## Analytical Results (Qualified Data)

Page 7 of 14

Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Number of Soil Samples : 0

Lab. :

KAP

Number of Water Samples : 4

Reviewer :

Number of Sediment Samples : 0

Date :

Sample Number :	E0066		E0066MS		E0066MSD		E0071		E0080	
Sampling Location :	G101		G101		G101		FB101		G102	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	4/22/2008						4/23/2008		4/23/2008	
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	5.8		5.8		5.8		6.1		5.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatle Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Phenol	5.0	U	33		24		5.0	U	5.0	U
Bis(2-chloroethyl)ether	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Chlorophenol	5.0	U	29		24		5.0	U	5.0	U
2-Methylphenol	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2,2'-Oxybis(1-chloropropane)	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetophenone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methylphenol	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
N-Nitroso-di-n-propylamine	5.0	U	33		25		5.0	U	5.0	U
Hexachloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Nitrobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Isophorone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Nitrophenol	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2,4-Dimethylphenol	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bis(2-chloroethoxy)methane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2,4-Dichlorophenol	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Naphthalene	5.0	U	5.0	U	5.0	U	5.0	U	9.4	
4-Chloroaniline	5.0	U	5.0	UJ	5.0	U	5.0	U	5.0	U
Hexachlorobutadiene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Caprolactam	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Chloro-3-methylphenol	5.0	U	28		25		5.0	U	5.0	U
2-Methylnaphthalene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Hexachlorocyclopentadiene	5.0	U	5.0	UJ	5.0	U	5.0	U	5.0	U
2,4,6-Trichlorophenol	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2,4,5-Trichlorophenol	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1'-Biphenyl	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Chloronaphthalene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Nitroaniline	10	U	10	U	10	U	10	U	10	U
Dimethylphthalate	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2,6-Dinitrotoluene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acenaphthylene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
3-Nitroaniline	10	U	10	U	10	U	10	U	10	U
Acenaphthene	5.0	U	22		21		5.0	U	5.0	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0066		E0066MS		E0066MSD		E0071		E0080	
Sampling Location :	G101		G101		G101		FB101		G102	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	4/22/2008						4/23/2008		4/23/2008	
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	5.8		5.8		5.8		6.1		5.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatle Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	10	U	10	U	10	U	10	U	10	U
4-Nitrophenol	10	U	25		25		10	U	10	U
Dibenzofuran	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2,4-Dinitrotoluene	5.0	U	24		24		5.0	U	5.0	U
Diethylphthalate	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Fluorene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Chlorophenyl-phenylether	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Nitroaniline	10	U	10	U	10	U	10	U	10	U
4,6-Dinitro-2-methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitrosodiphenylamine	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2,4,5-Tetrachlorobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Bromophenyl-phenylether	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Hexachlorobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Atrazine	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Pentachlorophenol	10	U	24		23		10	U	10	U
Phenanthrene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Anthracene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Carbazole	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Di-n-butylphthalate	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Fluoranthene	5.0	UJ	5.0	U	5.0	U	5.0	U	5.0	U
Pyrene	5.0	UJ	21		19		5.0	U	5.0	U
Butylbenzylphthalate	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
3,3'-Dichlorobenzidine	5.0	U	5.0	UJ	5.0	U	5.0	U	5.0	U
Benzo(a)anthracene	5.0	UJ	5.0	U	5.0	U	5.0	U	5.0	U
Chrysene	5.0	UJ	5.0	U	5.0	U	5.0	U	5.0	U
Bis(2-ethylhexyl)phthalate	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Di-n-octylphthalate	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Benzo(b)fluoranthene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Benzo(k)fluoranthene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Benzo(a)pyrene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Indeno(1,2,3-cd)pyrene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Dibenzo(a,h)anthracene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Benzo(g,h,i)perylene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2,3,4,6-Tetrachlorophenol	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U

## Analytical Results (Qualified Data)

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Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0081	SBLK67								
Sampling Location :	G103									
Matrix :	Water	Water								
Units :	ug/L	ug/L								
Date Sampled :	4/23/2008									
Time Sampled :										
%Moisture :	N/A	N/A								
pH :	6.6									
Dilution Factor :	1.0	1.0								
Semivolatle Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	5.0	U	5.0	U						
Phenol	5.0	U	5.0	U						
Bis(2-chloroethyl)ether	5.0	U	5.0	U						
2-Chlorophenol	5.0	U	5.0	U						
2-Methylphenol	5.0	U	5.0	U						
2,2'-Oxybis(1-chloropropane)	5.0	U	5.0	U						
Acetophenone	5.0	U	5.0	U						
4-Methylphenol	5.0	U	5.0	U						
N-Nitroso-di-n-propylamine	5.0	U	5.0	U						
Hexachloroethane	5.0	U	5.0	U						
Nitrobenzene	5.0	U	5.0	U						
Isophorone	5.0	U	5.0	U						
2-Nitrophenol	5.0	U	5.0	U						
2,4-Dimethylphenol	5.0	U	5.0	U						
Bis(2-chloroethoxy)methane	5.0	U	5.0	U						
2,4-Dichlorophenol	5.0	U	5.0	U						
Naphthalene	9.2		5.0	U						
4-Chloroaniline	5.0	U	5.0	U						
Hexachlorobutadiene	5.0	U	5.0	U						
Caprolactam	5.0	U	5.0	U						
4-Chloro-3-methylphenol	5.0	U	5.0	U						
2-Methylnaphthalene	5.0	U	5.0	U						
Hexachlorocyclopentadiene	5.0	U	5.0	U						
2,4,6-Trichlorophenol	5.0	U	5.0	U						
2,4,5-Trichlorophenol	5.0	U	5.0	U						
1,1'-Biphenyl	5.0	U	5.0	U						
2-Chloronaphthalene	5.0	U	5.0	U						
2-Nitroaniline	10	U	10	U						
Dimethylphthalate	5.0	U	5.0	U						
2,6-Dinitrotoluene	5.0	U	5.0	U						
Acenaphthylene	5.0	U	5.0	U						
3-Nitroaniline	10	U	10	U						
Acenaphthene	5.0	U	5.0	U						



## Analytical Results (Qualified Data)

Page 10 of 14

Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0081	SBLK67								
Sampling Location :	G103									
Matrix :	Water	Water								
Units :	ug/L	ug/L								
Date Sampled :	4/23/2008									
Time Sampled :										
%Moisture :	N/A	N/A								
pH :	6.6									
Dilution Factor :	1.0	1.0								
Semivolatle Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	10	U	10	U						
4-Nitrophenol	10	U	10	U						
Dibenzofuran	5.0	U	5.0	U						
2,4-Dinitrotoluene	5.0	U	5.0	U						
Diethylphthalate	5.0	U	5.0	U						
Fluorene	5.0	U	5.0	U						
4-Chlorophenyl-phenylether	5.0	U	5.0	U						
4-Nitroaniline	10	U	10	U						
4,6-Dinitro-2-methylphenol	10	U	10	U						
N-Nitrosodiphenylamine	5.0	U	5.0	U						
1,2,4,5-Tetrachlorobenzene	5.0	U	5.0	U						
4-Bromophenyl-phenylether	5.0	U	5.0	U						
Hexachlorobenzene	5.0	U	5.0	U						
Atrazine	5.0	U	5.0	U						
Pentachlorophenol	10	U	10	U						
Phenanthrene	5.0	U	5.0	U						
Anthracene	5.0	U	5.0	U						
Carbazole	5.0	U	5.0	U						
Di-n-butylphthalate	5.0	U	5.0	U						
Fluoranthene	5.0	U	5.0	U						
Pyrene	5.0	U	5.0	U						
Butylbenzylphthalate	5.0	U	5.0	U						
3,3'-Dichlorobenzidine	5.0	U	5.0	U						
Benzo(a)anthracene	5.0	U	5.0	U						
Chrysene	5.0	U	5.0	U						
Bis(2-ethylhexyl)phthalate	5.0	U	5.0	U						
Di-n-octylphthalate	5.0	U	5.0	U						
Benzo(b)fluoranthene	5.0	U	5.0	U						
Benzo(k)fluoranthene	5.0	U	5.0	U						
Benzo(a)pyrene	5.0	U	5.0	U						
Indeno(1,2,3-cd)pyrene	5.0	U	5.0	U						
Dibenzo(a,h)anthracene	5.0	U	5.0	U						
Benzo(g,h,i)perylene	5.0	U	5.0	U						
2,3,4,6-Tetrachlorophenol	5.0	U	5.0	U						



Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Number of Soil Samples : 0

Lab. :

KAP

Number of Water Samples : 4

Reviewer :

Number of Sediment Samples : 0

Date :

Sample Number :	E0066		E0066MS		E0066MSD		E0071		E0080	
Sampling Location :	G101		G101		G101		FB101		G102	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	4/22/2008						4/23/2008		4/23/2008	
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	5.8		5.8		5.8		6.1		5.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
beta-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
delta-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
gamma-BHC (Lindane)	0.050	U	0.60	J	0.76	J	0.050	U	0.050	U
Heptachlor	0.050	U	1.4	J	1.6	J	0.050	U	0.050	U
Aldrin	0.050	U	3.8	J	4.1	J	0.050	U	0.050	U
Heptachlor epoxide	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
Endosulfan I	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
Dieldrin	0.10	U	1.6	J	1.6	J	0.10	U	0.10	U
4,4'-DDE	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Endrin	0.10	U	1.3	J	1.7	J	0.10	U	0.10	U
Endosulfan II	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDD	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Endosulfan sulfate	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDT	0.10	U	1.1	J	1.5	J	0.10	U	0.10	U
Methoxychlor	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Endrin ketone	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Endrin aldehyde	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
alpha-Chlordane	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
gamma-Chlordane	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
Toxaphene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U

Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0081	PBLK58								
Sampling Location :	G103									
Matrix :	Water	Water								
Units :	ug/L	ug/L								
Date Sampled :	4/23/2008									
Time Sampled :										
%Moisture :	N/A	0								
pH :	6.6									
Dilution Factor :	1.0	1.0								
Pesticide Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	0.050	U	0.050	U						
beta-BHC	0.050	U	0.050	U						
delta-BHC	0.050	U	0.050	U						
gamma-BHC (Lindane)	0.050	U	0.050	U						
Heptachlor	0.050	U	0.050	U						
Aldrin	0.050	U	0.050	U						
Heptachlor epoxide	0.050	U	0.050	U						
Endosulfan I	0.050	U	0.050	U						
Dieldrin	0.10	U	0.10	U						
4,4'-DDE	0.10	U	0.10	U						
Endrin	0.10	U	0.10	U						
Endosulfan II	0.10	U	0.10	U						
4,4'-DDD	0.10	U	0.10	U						
Endosulfan sulfate	0.10	U	0.10	U						
4,4'-DDT	0.10	U	0.10	U						
Methoxychlor	0.50	U	0.50	U						
Endrin ketone	0.10	U	0.10	U						
Endrin aldehyde	0.10	U	0.10	U						
alpha-Chlordane	0.050	U	0.050	U						
gamma-Chlordane	0.050	U	0.050	U						
Toxaphene	5.0	U	5.0	U						

## Analytical Results (Qualified Data)

Page 13 of 14

Case #: 37407

SDG: E0066

Site:

LAKE CALUMET SMELTING

Number of Soil Samples: 0

Lab.:

KAP

Number of Water Samples: 4

Reviewer:

Number of Sediment Samples: 0

Date:

Sample Number :	ABLK57		E0066		E0066MS		E0066MSD		E0071	
Sampling Location :			G101		G101		G101		FB101	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :			4/22/2008						4/23/2008	
Time Sampled :										
%Moisture :	0		N/A		N/A		N/A		N/A	
pH :			5.8		5.8		5.8		6.1	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	1.0	U	1.0	U	29	J	26	J	1.0	U
Aroclor-1221	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1232	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1242	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1248	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1254	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1260	1.0	U	1.0	U	5.3		4.9	J	1.0	U
Aroclor-1262	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1268	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

## Analytical Results (Qualified Data)

Page 14 of 14

Case #: 37407

SDG : E0066

Site :

LAKE CALUMET SMELTING

Lab. :

KAP

Reviewer :

Date :

Sample Number :	E0080	E0081								
Sampling Location :	G102	G103								
Matrix :	Water	Water								
Units :	ug/L	ug/L								
Date Sampled :	4/23/2008	4/23/2008								
Time Sampled :										
%Moisture :	N/A	N/A								
pH :	5.6	6.6								
Dilution Factor :	1.0	1.0								
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	1.0	U	1.0	U						
Aroclor-1221	1.0	U	1.0	U						
Aroclor-1232	1.0	U	1.0	U						
Aroclor-1242	1.0	U	1.0	U						
Aroclor-1248	1.0	U	1.0	U						
Aroclor-1254	1.0	U	1.0	U						
Aroclor-1260	1.0	U	1.0	U						
Aroclor-1262	1.0	U	1.0	U						
Aroclor-1268	1.0	U	1.0	U						

## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc)	SDG E0066	Case 37407	Contract EPW05032	Region 5	DDTID 59101	SOW SOM01.2
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*Tentatively identified Compounds*

VOA	Low	Med	Sample=E0066	Location=G101	Matrix=Water	Level=LOW
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CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc)	SDG E0066	Case 37407	Contract EPW05032	Region 5	DDTID 59101	SOW SOM01.2
VOA Low Med						
Sample=E0070						
Location=TB101						
Matrix=Water						
Level=LOW						

*Tentatively identified Compounds*

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc)	SDG E0066	Case 37407	Contract EPW05032	Region 5	DDTID 59101	SOW SOM01.2
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*Tentatively identified Compounds*

VOA Low Med	Sample=E0071	Location=FB101	Matrix=Water	Level=LOW
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CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc)    SDG E0066    Case 37407    Contract EPW05032    Region 5    DDTID 59101    SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med    Sample=E0080    Location=G102    Matrix=Water    Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-02	10.45	5.3	J

## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc)	SDG E0066	Case 37407	Contract EPW05032	Region 5	DDTID 59101	SOW SOM01.2
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*Tentatively identified Compounds*

VOA Low Med	Sample=E0081	Location=G103	Matrix=Water	Level=LOW
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CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc) SDG E0066 Case 37407 Contract EPW05032 Region 5 DDTID 59101 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=E0084 Location=TB102 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	10.04	79	UG/L J

## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc)    SDG E0066    Case 37407    Contract EPW05032    Region 5    DDTID 59101    SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med    Sample=VBLK32    Location=No TR data    Matrix=Water    Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	10.07	65	UG/L J

## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc) SDG E0066 Case 37407 Contract EPW05032 Region 5 DDTID 59101 SOW SOM01.2

*Tentatively identified Compounds*

VOA Low Med Sample=VBLK51 Location=No TR data Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	10.07	76	UG/L J

## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc)	SDG E0066	Case 37407	Contract EPW05032	Region 5	DDTID 59101	SOW SOM01.2
<b><i>Tentatively identified Compounds</i></b>						
VOA Low Med	Sample=VHBLK01	Location=No TR data		Matrix=Water	Level=LOW	

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
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## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc) SDG E0066 Case 37407 Contract EPW05032 Region 5 DDTID 59101 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0066 Location=G101 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
	Unknown-01	10.49	2.7	UG/L J
	Unknown-02	17.59	2.9	J
007683-64-9	Squalene	18.7	3.0	NJ



## National Functional Guidelines Report # 9

Lab KAP (KAP Technologies Inc) SDG E0066 Case 37407 Contract EPW05032 Region 5 DDTID 59101 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0071 Location=FB101 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
000097-39-2	Guanidine, N,N'-bis(2-methylphenyl)-	16.61	8.3	UG/L NJ
	Unknown-01	17.04	3.6	J
	Unknown-02	17.32	3.2	J
	Unknown-03	17.54	3.4	J
	Unknown-04	17.66	4.4	J
000111-02-4	2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)-	18.7	4.1	NJ
	Unknown-05	19.19	3.1	J

## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc) SDG E0066

Case 37407

Contract EPW05032

Region 5

DDTID 59101

SOW SOM01.2

***Tentatively identified Compounds***

BNA Sample=E0080 Location=G102 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
025057-89-0	Benzazone	15.67	7.9	UG/L NJ
000123-95-5	Octadecanoic acid, butyl ester	16.92	6.4	NJ
	Unknown-01	17.12	4.3	J
000602-09-5	[1,1'-Binaphthalene]-2,2'-diol	17.99	22	NJ
	Unknown-04	18.19	3.8	J
	Unknown-02	18.19	7.7	J
	Unknown-03	18.19	4.6	J
303097-62-3	2-Phenylcyclopropionamide, N-(4-phenylazo)phenyl-	18.19	4.7	NJ
	Unknown-05	18.7	3.5	J
	Unknown-06	18.88	3.3	J

## National Functional Guidelines Report # 9

21:51 Fri, May 16, 2008

Lab KAP (KAP Technologies Inc) SDG E0066 Case 37407 Contract EPW05032 Region 5 DDTID 59101 SOW SOM01.2

*Tentatively identified Compounds*

BNA Sample=E0081 Location=G103 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier
025057-89-0	Bentazone	15.67	8.7	UG/L NJ
	Unknown-01	17.86	3.3	J
000602-09-5	[1,1'-Binaphthalene]-2,2'-diol	17.98	2.4	NJ
000602-09-5	[1,1'-Binaphthalene]-2,2'-diol	17.99	13	NJ
	Unknown-02	18.19	4.8	J

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

DATE:

SUBJECT: Review of Data  
Received for Review on 19 May 08

FROM: Stephen L. Ostrodka, Chief (SRT-4J)  
Superfund Field Services Section

TO: Data User: EPA

We have reviewed the data for the following case:

SITE NAME: LAKE CALUMET Smelting + Refining (IL)

CASE NUMBER: 37407 SDG NUMBER: E0066

Number and Type of Samples: 6 WATER samples

Sample Numbers: E0066; 70-71; 80-81; 84

Laboratory: Kap Technologies Hrs for Review: \_\_\_\_\_

Following are our findings:

CC: Howard Pham  
Region 5 TPO  
Mail Code: SRT-4J



## Contract Laboratory Program

### Sample Delivery Group (SDG) Cover Sheet

SDG Number E0066

Laboratory Name Kap Technologies Inc Lab Code KAP

Contract No. EPW05032 Case No. 37407

Analysis Price \_\_\_\_\_ SDG Turnaround 21 Days

#### EPA Sample Numbers in SDG (Listed in Numerical Order)

1) E0066	7)	13)	19)
2) E0070	8)	14)	20)
3) E0071	9)	15)	21)
4) E0080	10)	16)	22)
5) E0081	11)	17)	23)
6) E0084	12)	18)	24)

First Sample in SDG

E0066

Last Sample in SDG

E0084

First Sample Receipt Date  
Date

04/23/08

Last Sample Receipt

04/25/08

**Note:** There are a maximum of 20 **field** samples [excluding Performance Evaluation (PE) samples] in an

SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature \_\_\_\_\_

Date 4/28/08



USEPA Contract Laboratory Program  
Organic Traffic Report & Chain of Custody Record

Date Shipped: 4/22/2008		Case No: 37407	
Carrier Name: UPS		DAS No: E0066	
Airbill: 126215892210082866		SDG No: E0066	
Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065		For Lab Use Only Lab Contract No: EPW05032	
		Unit Price:	
		Transfer To:	
		Lab Contract No:	
		Unit Price:	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0066	Ground Water/ Jerry Willman	L/G	CLP-PEST/P (21), SVOA-SOM (21), VOA-SOM (21)	5-264055 (Ice Only), 5-277441 (HCL), 5-277446 (Ice Only), 5-277447 (Ice Only), 5-277448 (Ice Only), 5-277449 (Ice Only), 5-277450 (Ice Only), 5-55296 (HCL), 5-55297 (HCL), 5-55298 (HCL), 5-55299 (HCL), 5-55300 (HCL) (12)	G101	S: 4/22/2008 15:40	ME0066	S-0 875-01 En 53
E0067	Soil/Sediment/ Jerry Willman	L/G	ARO, PST, SV (21), Encore (21)	5-277443 (Ice Only), 5-277444 (Ice Only) (2)	X117	S: 4/22/2008 17:10	ME0067	

ORIGINAL  
Case 37407 SDG E0066  
Episode: 5-0874 init/date 4/22/08

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: E0057, E0066	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 2.5C	Chain of Custody Seal Number: 89313 89311
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? Y	Shipment Iced? Y
ARO, PST, SV = CLP-SVOA, PEST/AROCOR-SOM, CLP-PEST/P = CLP-Pesticides/Aroclor-SOM, Encore = CLP-VOA-Encore, SVOA-SOM = CLP-SVOA-SOM, VOA-SOM = CLP-VOA-SOM				

TR Number: 5-162075208-042208-0004

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC; 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

LABORATORY COPY

F2/51.047 Page 2 of 2



USEPA Contract Laboratory Program  
Organic Traffic Report & Chain of Custody Record

Case No:	37407
DAS No:	
SDG No:	E0066
For Lab Use Only	
Lab Contract No:	EPW05032
Unit Price:	
Transfer To:	
Lab Contract No:	
Unit Price:	

Date Shipped:	4/23/2008
Carrier Name:	UPS
Airbill:	156215892210027130
Shipped to:	KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065
Relinquished By	(Date / Time)
1	4/23/2008 19:00
2	
3	
4	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	PRESERVATIVE/ Bottles	TAG No./	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0070	Ground Water/ Jerry Willman	L/G	VOA-SOM (21)	5-264064 (Ice Only), 5-264065 (Ice Only) (2)		TB101	S: 4/23/2008 8:45		S-0877-01
E0071	Field QC/ Jerry Willman	L/G	CLP-PEST/P (21), SVOA-SOM (21), VOA-SOM (21)	5-264068 (HCL), 5-264069 (HCL), 5-264070 (Ice Only), 5-264071 (Ice Only) (4)		FB101	S: 4/23/2008 9:00	ME0071	
E0072	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264073 (Ice Only), 5-264074 (Ice Only) (2)		X118	S: 4/23/2008 9:00	ME0072	
E0073	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264077 (Ice Only), 5-264078 (Ice Only) (2)		X119	S: 4/23/2008 9:00	ME0073	
E0074	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264081 (Ice Only), 5-264082 (Ice Only) (2)		X120	S: 4/23/2008 10:25	ME0074	
E0075	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), Encore (21)	5-264085 (Ice Only), 5-264086 (Ice Only) (2)		X121	S: 4/23/2008 11:00	ME0075	
E0076	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-264090 (Ice Only), 5-264091 (Ice Only), 5-264092 (Ice Only) (3)		X202	S: 4/23/2008 12:40	ME0076	
E0077	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-264094 (Ice Only), 5-264095 (Ice Only), 5-264096 (Ice Only) (3)		X203	S: 4/23/2008 12:40	ME0077	
E0078	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-264098 (Ice Only), 5-264099 (Ice Only), 5-303479 (Ice Only) (3)		X204	S: 4/23/2008 13:20	ME0078	
E0079	Soil/Sediment/ Jerry Willman	L/G	ARO,PST,SV (21), VOA-SOM (21)	5-303481 (Ice Only), 5-303482 (Ice Only), 5-303483 (Ice Only) (3)		X205	S: 4/23/2008 13:45	ME0079	

ORIGINAL  
Case 37407 SDG E0066  
Episode 5-0877 init/date 4/24/08

Shipment for Case Complete?	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 2°C	Chain of Custody Seal Number: 89316 89317
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
ARO,PST,SV = CLP-SVOA, PEST/AROCOLOR-SOM, CLP-PEST/P = CLP-Pesticides/Arroclor-SOM, Encore = CLP-VOA-Encore, SVOA-SOM = CLP-SVOA-SOM, VOA-SOM = CLP-VOA-SOM				

TR Number: 5-162075208-042308-0004

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

LABORATORY COPY





USEPA Contract Laboratory Program  
Organic Traffic Report & Chain of Custody Record

Case No: 37407  
DAS No: E0066  
SDG No: L

Date Shipped: 4/24/2008	Carrier Name: UPS	Airbill: 126215892210027176	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065
Chain of Custody Record		Sampler Signature: <i>[Signature]</i>	Received By: <i>[Signature]</i>
Relinquished By: <i>[Signature]</i>	(Date / Time): 4/25/08	(Date / Time): 12:35	
1	2	3	4

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	PRESERVATIVE/ Bottles	TAG No./	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0080	Ground Water/ Jerry Willman	L/G	CLP-PEST/P (21), SVOA-SOM (21), VOA-SOM (21)	5-303486 (HCL), 5-303487 (HCL), 5-303488 (Ice Only), 5-303489 (Ice Only) (4)	5-303487	G102	S: 4/23/2008 16:30	ME0080	S-0883.01
E0081	Ground Water/ Jerry Willman	L/G	CLP-PEST/P (21), SVOA-SOM (21), VOA-SOM (21)	5-303492 (HCL), 5-303493 (HCL), 5-303494 (Ice Only), 5-303495 (Ice Only) (4)	5-303493	G103	S: 4/23/2008 16:30	ME0081	.02
E0084	Ground Water/ Jerry Willman	L/G	VOA-SOM (21)	5-303504 (HCL), 5-303505 (HCL) (2)	5-303505	TB102	S: 4/24/2008 12:04		.03

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 3°C	Chain of Custody Seal Number: 99318
Analysis Key: CLP-PEST/P = CLP-Pesticides/Aroclor-SOM, SVOA-SOM = CLP-SVOA-SOM, VOA-SOM = CLP-VOA-SOM	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? Y	Shipment Iced? Y

TR Number: 5-162075208-042408-0002

LABORATORY COPY

**KAP TECHNOLOGIES, INC.**

9391 Grogans Mill Rd, Suite A2 • The Woodlands, TX 77380 • Phone (281) 367-0065

**Contract No. EPW05032****Case No. 37407****SDG No. E0066****SDG NARRATIVE****SAMPLE RECEIPT:**

**On 04/23/08 @ 10:00 A.M.** - Received two coolers via UPS with shipment numbers 1Z6215892210027121 and 82866 and the cooler temperatures were 2.5<sup>0</sup>C and 2.5<sup>0</sup>C.

**On 04/24/08 @ 10:15 A.M.** - Received one cooler via UPS with shipment numbers 1Z6215892210027158 and the cooler temperatures was 2<sup>0</sup>C.

**On 04/24/08 @ 12:55 A.M.** - Received one cooler via UPS with shipment numbers 1Z6215892210027176 and the cooler temperatures was 3<sup>0</sup>C.

The package contained the following samples for VOA, BNA PESTICIDES and PCB analyses.

The custody seals and the samples were intact.

EPA SAMPLE ID	pH	EPA SAMPLE ID	pH
E0066	<2	E0066MS	<2
E0070	<2	E0066MSD	<2
E0071	<2		
E0080	<2		
E0081	<2		
E0084	<2		

No problems were encountered during sample receiving and login.

**VOLATILES WATER:**

The sample for VOA was analyzed on instrument B-5973 GC/MS using a 30 meters long RTX-VMS column having a 0.25mm ID and 3µm film thickness. The trap used was OV-1/Tenax/Silica Gel (Tekmar #6 CAT #14-1755-003).

A 5 mL purge volume was used for water sample analyses, blanks and calibration standards. The concentrations of the standards and spikes were maintained at the levels required by the Statement of Work (SOW).

The water samples were analyzed for Volatiles according the SOM 1.2 statement of work.

No problems were encountered during the analysis of this sample.

**The formula used to calculate the Sample concentration:**

$$\text{Concentration in ug/L} = \frac{(A_x) (I_s) (DF)}{(A_{is}) (RRF) (V_o)}$$

001

KAP TECHNOLOGIES, INC.

9391 Grogans Mill Rd, Suite A2 • The Woodlands, TX 77380 • Phone (281) 367-0065

Contract No. EPW05032

Case No. 37407

SDG No. E0066

SDG NARRATIVE

Where,

$A_x$  = Area of the characteristic ion (EICP) for the compound to be measured.

$A_{is}$  = Area of the characteristic ion (EICP) for the internal standard.

$I_s$  = Amount of internal standard added in ng.

$RRF$  = Mean relative Response Factor from the initial calibration standard.

$V_o$  = Total Volume of water purged, in ml.

$DF$  = Dilution Factor.

**SEMIVOLATILES:**

The water samples were extracted on 04/26/08 using continuous Liquid/Liquid Extraction as per statement of work SOM 1.2. No problems were encountered during extraction and analysis.

The samples were analyzed on instrument F-5973 GC/MS using a 30 meters long RTX-5MS column having a 0.25mm ID and 0.25 $\mu$ m film thickness.

No problems were encountered during the sample analyses.

**The formula used to calculate the Sample concentration:**

**WATER SAMPLES:**

$$\text{Concentration ug/L} = \frac{(A_x)(I_s)(V_t)(DF)}{(A_{is})(RRF)(V_o)(V_i)}$$

Where,

$A_x$  = Area of the characteristic ion for the compound to be measured.

$A_{is}$  = Area of the characteristic ion for the internal standard.

$I_s$  = Amount of internal standard injected in ng

$V_o$  = Volume of water extracted in mL.

$V_i$  = Volume of extract injected in uL.

$RRF$  = Mean Relative Response Factor determined from the initial calibration Standard.

$DF$  = Dilution Factor.

**PESTICIDES:**

The water sample was extracted using separatory funnel extraction method on 04/26/08 as per statement of work SOM 1.2.

As per the SOW, one liter of water sample was extracted to an intermediary volume of 10ml.

No problems were encountered during extraction and sample analyses.

1) RTX-CLP2: 30m\*0.53mmID\*0.41 $\mu$ m film thickness. (Primary Column)

2) RTX-CLP: 30m\*0.53mmID\*0.50 $\mu$ m film thickness. (Confirmation Column)

002

Contract No. EPW05032

Case No. 37407

SDG No. E0066

SDG NARRATIVE

A 1uL injection was used.

**The formula used to calculate the Sample concentration:**

**WATER SAMPLES:**

$$\text{Concentration ug/L} = \frac{(Ax)(Vt)(DF)}{(CF)(Vo)(Vi)}$$

Where,

- Ax = Response of the compound to be measured.
- CF = Mean calibration factor from the initial calibration (area/ng)
- Vt = Volume of the concentrated extract (uL)
- Vi = Volume of extract injected.
- Vo = Volume of water extracted
- DF = Dilution Factor.

**AROCLORS:**

The water sample was extracted using separatory funnel extraction method on 04/25/08 as per statement of work SOM 1.2.

All samples were analyzed on a P-6890 GC using two columns manufactured by Restek  
RTX – CLP2: 30m\*0.53mmID\*0.41um film thickness. (Primary Column)  
RTX – CLP: 30m\*0.53mmID\*0.50um film thickness. (Confirmation Column)  
A 1uL injection was used.

**The formula used to calculate the Sample concentration:**

**WATER SAMPLES:**

$$\text{Concentration of the sample ug/L} = \frac{(Ax)(Vt)(DF)}{(CF)(Vo)(Vi)}$$

Where,

- Ax = Response of the compound to be measured.
- CF = Mean calibration factor from the initial calibration (area/ng)
- Vt = Volume of the concentrated extract (uL)
- Vi = Volume of extract injected.
- Vo = Volume of water extracted
- DF = Dilution Factor.

002

KAP TECHNOLOGIES, INC.

9391 Grogans Mill Rd, Suite A2 • The Woodlands, TX 77380 • Phone (281) 367-0065

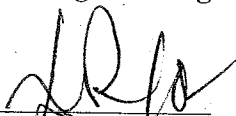
Contract No. EPW05032

Case No. 37407

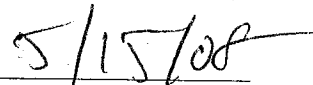
SDG No. E0066

SDG NARRATIVE

*I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy sample data package and in the electronic data deliverable has been authorized by the laboratory manager or the manager's designee, as verified by the following signature:*



Signature/Title



Date of Signature

004

2A - FORM II VOA-1  
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
Level: (TRACE or LOW) LOW

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLK32	93	99	80	71	92	103	96
02	E0066	91	145 *	79	74	95	107	96
03	E0066MS	78	110	92	69	91	102	94
04	E0066MSD	70	144 *	91	77	91	104	92
05	E0070	81	140 *	77	76	95	107	96
06	E0071	94	153 *	80	75	97	106	99
07	VBLK40	108	121	90	90	100	108	104
08	E0080	106	55 *	83	74	91	98	96
09	E0081	100	57 *	84	89	92	102	96
10	E0082	101	71	83	76	94	100	96
11	VBLK51	92	86	83	73	93	100	98
12	VHBLK01	97	110	86	73	96	102	100
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30								

VDMC1 (VCL) = Vinyl Chloride-d3  
VDMC2 (CLA) = Chloroethane-d5  
VDMC3 (DCE) = 1,1-Dichloroethene-d2  
VDMC4 (BUT) = 2-Butanone-d5  
VDMC5 (CLF) = Chloroform-d  
VDMC6 (DCA) = 1,2-Dichloroethane-d4  
VDMC7 (BEN) = Benzene-d6

QC LIMITS  
(65-131)  
(71-131)  
(55-104)  
(49-155)  
(78-121)  
(78-129)  
(77-124)

# Column to be used to flag recovery values  
\* Values outside of contract required QC limits

2B - FORM II VOA-2  
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407 Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Level: (TRACE or LOW) LOW

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (DXE) #	VDMC13 (TCA) #	VDMC14 (DCZ) #	TOT OUT
01	VBLK32	95	98	87	61	111	84	93	0
02	E0066	97	98	91	63	93	86	93	1
03	E0066MS	95	96	88	59	93	79	90	0
04	E0066MSD	94	94	89	67	99	86	91	1
05	E0070	97	97	92	64	99	85	93	1
06	E0071	98	99	92	64	96	87	95	1
07	VBLK40	102	107	98	89	91	90	101	0
08	E0080	95	100	90	72	88	81	97	1
09	E0081	96	100	94	89	100	90	97	1
10	E0082	95	99	90	73	85	80	96	0
11	VBLK51	95	101	89	72	81	84	97	0
12	VHBLK01	96	103	90	71	83	84	99	0
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VDMC8 (DPA) = 1,2-Dichloropropane-d6  
VDMC9 (TOL) = Toluene-d8  
VDMC10 (TDP) = trans-1,3-Dichloropropene-d4  
VDMC11 (HEX) = 2-Hexanone-d5  
VDMC12 (DXE) = 1,4-Dioxane-d8  
VDMC13 (TCA) = 1,1,2,2-Tetrachloroethane-d2  
VDMC14 (DCZ) = 1,2-Dichlorobenzene-d4

QC LIMITS  
(79-124)  
(77-121)  
(73-121)  
(28-135)  
(50-150)  
(73-125)  
(80-131)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

3A - FORM III VOA-1  
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066

Matrix Spike - EPA Sample No.: E0066

Level: (TRACE/LOW) LOW

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0	31	62	61-145
Trichloroethene	50	0	42	84	71-120
Benzene	50	5.5	42	73 *	76-127
Toluene	50	2.5	48	91	76-125
Chlorobenzene	50	0	49	98	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	%	QC LIMITS	
					RPD	REC.
1,1-Dichloroethene	50	31	62	0	0-14	61-145
Trichloroethene	50	42	84	0	0-14	71-120
Benzene	50	43	75 *	3	0-11	76-127
Toluene	50	50	95	4	0-13	76-125
Chlorobenzene	50	50	100	2	0-13	75-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 2 out of 10 outside limits

COMMENTS:

SOM01.1 (5/2005)

00013



4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK32

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Lab File ID: B15744

Lab Sample ID: VBLK32

Instrument ID: B-5973

Matrix: (SOIL/SED/WATER) WATER

Date Analyzed: 05/02/2008

Level: (TRACE or LOW/MED LOW

Time Analyzed: 1736

GC Column: RTX-VMS ID: 0.25 (mm)

Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0066	S-0875.01	B15745	1812
02	E0066MS	S-0875.01MS	B15746	1847
03	E0066MSD	S-0875.01MSD	B15747	1920
04	E0070	S-0877.01	B15748	1954
05	E0071	S-0877.02	B15749	2027
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COMMENTS: \_\_\_\_\_

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK40

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Lab File ID: B15813

Lab Sample ID: VBLK40

Instrument ID: B-5973

Matrix: (SOIL/SED/WATER) WATER

Date Analyzed: 05/05/2008

Level: (TRACE or LOW/MED LOW)

Time Analyzed: 1430

GC Column: RTX-VMS ID: 0.25 (mm)

Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0080	S-0883.01	B15814	1505
02	E0081	S-0883.02	B15815	1538
03	E0082	S-0883.03	B15816	1611
04				
05				
06				
07				
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COMMENTS: \_\_\_\_\_

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK51

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Lab File ID: B15903

Lab Sample ID: VBLK51

Instrument ID: B-5973

Matrix: (SOIL/SED/WATER) WATER

Date Analyzed: 05/08/2008

Level: (TRACE or LOW/MED LOW

Time Analyzed: 1538

GC Column: RTX-VMS ID: 0.25 (mm)

Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHBLK01	S-0875.02	B15906	1719
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
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COMMENTS: \_\_\_\_\_

## 8A - FORM VIII VOA

## VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

GC Column: RTX-VMS ID: 0.25 (mm) Init. Calib. Date(s): 04/28/2008 04/28/2008

EPA Sample No. (VSTD#####): VSTD05032

Date Analyzed: 05/02/2008

Lab File ID (Standard): B15742

Time Analyzed: 1624

Instrument ID: B-5973

Heated Purge: (Y/N) N

	IS1 (CBZ) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	4246436	12.88	5105044	8.31	1829264	16.96
UPPER LIMIT	8492872	13.38	10210088	8.81	3658528	17.46
LOWER LIMIT	2123218	12.38	2552522	7.81	914632	16.46
EPA SAMPLE No.						
01 VSTD05032	4246436	12.88	5105044	8.31	1829264	16.96
02 VBLK32	5447079	12.87	6485895	8.31	2306899	16.95
03 E0066	5607967	12.88	6572774	8.31	2314058	16.96
04 E0066MS	5824737	12.88	6865618	8.31	2326619	16.96
05 E0066MSD	5660492	12.88	6666519	8.31	2256349	16.96
06 E0070	5469728	12.87	6474616	8.31	2155203	16.96
07 E0071	5068852	12.87	6024423	8.31	1994597	16.95
08 VSTD05033	4327441	12.87	5231642	8.30	1904269	16.95
09						
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21						
22						

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8A - FORM VIII VOA

## VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

GC Column: RTX-VMS ID: 0.25 (mm) Init. Calib. Date(s): 05/05/2008 05/05/2008

EPA Sample No. (VSTD#####): VSTD05039

Date Analyzed: 05/05/2008

Lab File ID (Standard): B15809

Time Analyzed: 1126

Instrument ID: B-5973

Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	4473736	12.84	5437967	8.27	1861960	16.92
UPPER LIMIT	8947472	13.34	10875934	8.77	3723920	17.42
LOWER LIMIT	2236868	12.34	2718983	7.77	930980	16.42
EPA SAMPLE No.						
01 VBLK40	4682415	12.84	5504080	8.27	1948568	16.92
02 E0080	5106368	12.84	6068416	8.28	2042237	16.92
03 E0081	5173971	12.84	6094756	8.28	2114637	16.92
04 E0082	5285316	12.84	6145746	8.28	2128746	16.92
05 VSTD05040	4793463	12.84	4995794	8.28	2110021	16.92
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22						

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8A - FORM VIII VOA

## VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

GC Column: RTX-VMS ID: 0.25 (mm) Init. Calib. Date(s): 05/05/2008 05/05/2008

EPA Sample No. (VSTD#####): VSTD05051

Date Analyzed: 05/08/2008

Lab File ID (Standard): B15902

Time Analyzed: 1432

Instrument ID: B-5973

Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	3503492	12.87	4127479	8.30	1532226	16.95
UPPER LIMIT	7006984	13.37	8254958	8.80	3064452	17.45
LOWER LIMIT	1751746	12.37	2063739	7.80	766113	16.45
EPA SAMPLE No.						
01 VSTD05051	3503492	12.87	4127479	8.30	1532226	16.95
02 VBLK51	4301196	12.87	5085254	8.31	1700125	16.95
03 VHBLK01	3926204	12.87	4629119	8.31	1486693	16.95
04 VSTD05052	3503729	12.87	4124499	8.31	1483861	16.95
05						
06						
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22						

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

2G - FORM II SV-1  
WATER SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407 Mod. Ref No.:

SDG No.: E0066

	EPA SAMPLE NO.	SDMC1 (PHL) #	SDMC2 (BCE) #	SDMC3 (2CP) #	SDMC4 (4MP) #	SDMC5 (NBZ) #	SDMC6 (2NP) #	SDMC7 (DCP) #	SDMC8 (4CA) #
01	E0066	47	44	49	62	48	48	52	46
02	E0071	68	61	73	91	60	64	72	59
03	E0080	57	58	64	72	59	60	67	58
04	E0081	52	53	61	69	53	58	65	4
05	E0066MS	85	66	86	90	60	67	73	0 *
06	E0066MSD	57	54	67	78	57	64	68	3
07	SBLK67	51	47	59	71	51	56	62	54
08									
09									
10									
11									
12									
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SDMC1 (PHL) = Phenol-d5	QC LIMITS (39-106)
SDMC2 (BCE) = Bis-(2-chloroethyl)ether-d8	(40-105)
SDMC3 (2CP) = 2-Chlorophenol-d4	(41-106)
SDMC4 (4MP) = 4-Methylphenol-d8	(25-111)
SDMC5 (NBZ) = Nitrobenzene-d5	(43-108)
SDMC6 (2NP) = 2-Nitrophenol-d4	(40-108)
SDMC7 (DCP) = 2,4-Dichlorophenol-d3	(37-105)
SDMC8 (4CA) = 4-Chloroaniline-d4	(1-145)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D DMC diluted out

2H - FORM II SV-2  
WATER SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066

	EPA SAMPLE NO.	SDMC9 (DMP) #	SDMC10 (ACY) #	SDMC11 (4NP) #	SDMC12 (FLR) #	SDMC13 (NMP) #	SDMC14 (ANC) #	SDMC15 (PYR) #	SDMC16 (BAP) #	TOT OUT
01	E0066	53	53	43	57	31	53	47 *	54	1
02	E0071	67	65	54	64	48	65	80	66	0
03	E0080	66	64	64	64	45	65	66	65	0
04	E0081	63	60	51	58	41	62	55	62	0
05	E0066MS	63	60	64	59	61	61	72	61	1
06	E0066MSD	62	58	66	58	54	60	65	57	0
07	SBLK67	61	59	52	57	35	60	59	60	0
08										
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QC LIMITS

SDMC9 (DMP) = Dimethylphthalate-d6	(47-114)
SDMC10 (ACY) = Acenaphthylene-d8	(41-107)
SDMC11 (4NP) = 4-Nitrophenol-d4	(33-116)
SDMC12 (FLR) = Fluorene-d10	(42-111)
SDMC13 (NMP) = 4,6-Dinitro-2-methylphenol-d2	(22-104)
SDMC14 (ANC) = Anthracene-d10	(44-110)
SDMC15 (PYR) = Pyrene-d10	(52-119)
SDMC16 (BAP) = Benzo(a)pyrene-d12	(32-121)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D DMC diluted out



3C - FORM III SV-1  
WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Matrix Spike - EPA Sample No.: E0066

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	40	0	33	82	12-110
2-Chlorophenol	40	0	29	72	27-123
N-Nitroso-di-n-propylamine	40	0	33	82	41-116
4-Chloro-3-methylphenol	40	0	28	70	23-97
Acenaphthene	40	0	22	55	46-118
4-Nitrophenol	40	0	25	62	10-80
2,4-Dinitrotoluene	40	0	24	60	24-96
Pentachlorophenol	40	0	24	60	9-103
Pyrene	40	0	21	52	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Phenol	40	24	60	31	0-42	12-110
2-Chlorophenol	40	24	60	18	0-40	27-123
N-Nitroso-di-n-propylamine	40	25	62	28	0-38	41-116
4-Chloro-3-methylphenol	40	25	62	12	0-42	23-97
Acenaphthene	40	21	52	6	0-31	46-118
4-Nitrophenol	40	25	62	0	0-50	10-80
2,4-Dinitrotoluene	40	24	60	0	0-38	24-96
Pentachlorophenol	40	23	58	3	0-50	9-103
Pyrene	40	19	48	8	0-31	26-127

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 9 outside limits

Spike Recovery: 0 out of 18 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

00277

4C - FORM IV SV  
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK67

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Lab File ID: F25577

Lab Sample ID: SBLK67

Instrument ID: F-5973

Date Extracted 04/26/2008

Matrix: (SOIL/SED/WATER) WATER

Date Analyzed: 05/11/2008

Level: (LOW/MED) LOW

Time Analyzed: 0417

Extraction: (Type) CONT

GPC Cleanup: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	E0066	S-0875.01	F25563	05/10/2008
02	E0071	S-0877.02	F25565	05/10/2008
03	E0080	S-0883.01	F25566	05/10/2008
04	E0081	S-0883.02	F25567	05/10/2008
05	E0066MS	S-0875.01MS	F25568	05/10/2008
06	E0066MSD	S-0875.01MSD	F25569	05/11/2008
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COMMENTS: \_\_\_\_\_

## 8C - FORM VIII SV-1

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

GC Column: RTX-5MS ID: 0.25 (mm) Init. Calib. Date(s): 05/09/2008 05/09/2008

EPA Sample No. (SSTD020##): SSTD02092

Date Analyzed: 05/10/2008

Lab File ID (Standard): F25560

Time Analyzed: 1915

Instrument ID: F-5973

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	802908	6.03	4400958	8.81	3428554	12.63
UPPER LIMIT	1605816	6.53	8801916	9.31	6857108	13.13
LOWER LIMIT	401454	5.53	2200479	8.31	1714277	12.13
EPA SAMPLE NO.						
01 E0066	857850	6.02	4569356	8.80	2872194	12.62
02 E0071	1359825	6.02	7277043	8.80	5193489	12.62
03 E0080	792467	6.02	3945262	8.80	2634406	12.62
04 E0081	529401	6.02	2729660	8.80	1887571	12.62
05 E0066MS	1363622	6.02	8326529	8.80	5802537	12.62
06 E0066MSD	1249907	6.02	6531648	8.79	4425219	12.62
07 SBLK67	709445	6.01	3678976	8.79	2453585	12.61
08 SSTD02093	669171	6.01	3906599	8.79	3203669	12.61
09						
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18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (DCB) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

## 8D - FORM VIII SV-2

## SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

EPA Sample No. (SSTD020##): SSTD02092

Date Analyzed: 05/10/2008

Lab File ID (Standard): F25560

Time Analyzed: 1915

Instrument ID: F-5973

GC Column: RTX-5MS

ID: 0.25

(mm)

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	6629254	14.63	7784738	17.48	10100015	19.48
UPPER LIMIT	13258508	15.13	15569476	17.98	20200030	19.98
LOWER LIMIT	3314627	14.13	3892369	16.98	5050007	18.98
EPA SAMPLE NO.						
01 E0066	6405992	14.62	10108199	17.48	13202703	19.47
02 E0071	9556660	14.62	10432878	17.47	12917129	19.47
03 E0080	5643388	14.62	9204347	17.47	13808170	19.47
04 E0081	3451093	14.62	6989394	17.47	11321717	19.47
05 E0066MS	10630039	14.62	12902921	17.47	15260876	19.47
06 E0066MSD	9055910	14.62	12522869	17.47	15738395	19.47
07 SBLK67	5350136	14.61	9063117	17.47	11634275	19.45
08 SSTD02093	6629701	14.61	8218230	17.47	10113076	19.45
09						
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20						
21						
22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

2N - FORM II PEST-1  
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2) RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PIBLKY1	68	68	85	87			0
02	PIBLKZ1	87	84	108	102			0
03	PIBLK11	76	71	107	105			0
04	PLCS58	107	97	132	119			0
05	PBLK58	132	133	148	165 *			1
06	E0066	130	114	168 *	197 *			2
07	E0066MS	75	91	119	187 *			1
08	E0066MSD	88	89	158 *	185 *			2
09	E0071	123	130	158 *	187 *			2
10	E0081	92	102	119	127			0
11	PIBLK21	63	68	86	103			0
12	E0080	69	117	93	96			0
13	PIBLK31	65	63	89	92			0
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15								
16								
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TCX = Tetrachloro-m-xylene  
DCB = Decachlorobiphenyl

QC LIMITS  
(30-150)  
(30-150)

# Column to be used to flag recovery values  
\* Values outside of contract required QC limits  
D Surrogate diluted out

3G - FORM III PEST-1  
WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Matrix Spike - EPA Sample No.: E0066

Instrument ID: A-6890A

GC Column: RTX-CLP2 ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	0.500	0	0.603	121	56-123
Heptachlor	0.500	0	1.42	284 *	40-131
Aldrin	0.500	0	4.57	914 *	40-120
Dieldrin	1.00	0	1.95	195 *	52-126
Endrin	1.00	0	1.26	126 *	56-121
4,4'-DDT	1.00	0	1.09	109	38-127

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
gamma-BHC (Lindane)	0.500	0.763	153 *	23 *	15	56-123
Heptachlor	0.500	1.58	316 *	11	20	40-131
Aldrin	0.500	4.67	934 *	2	22	40-120
Dieldrin	1.00	2.07	207 *	6	18	52-126
Endrin	1.00	1.65	165 *	27 *	21	56-121
4,4'-DDT	1.00	1.52	152 *	33 *	27	38-127

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 3 out of 6 outside limits

Spike Recovery: 10 out of 12 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

00478

3G - FORM III PEST-1  
WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Matrix Spike - EPA Sample No.: E0066

Instrument ID: A-6890B

GC Column: RTX-CLP ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	0.500	0	0.788	158 *	56-123
Heptachlor	0.500	0	3.28	656 *	40-131
Aldrin	0.500	0	3.85	770 *	40-120
Dieldrin	1.00	0	1.61	161 *	52-126
Endrin	1.00	0	1.66	166 *	56-121
4,4'-DDT	1.00	0	1.44	144 *	38-127

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
gamma-BHC (Lindane)	0.500	0.821	164 *	4	15	56-123
Heptachlor	0.500	2.99	598 *	9	20	40-131
Aldrin	0.500	4.09	818 *	6	22	40-120
Dieldrin	1.00	1.64	164 *	2	18	52-126
Endrin	1.00	1.69	169 *	2	21	56-121
4,4'-DDT	1.00	1.45	145 *	1	27	38-127

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 6 outside limits

Spike Recovery: 12 out of 12 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

3L - FORM III PEST-3  
WATER PESTICIDE LABORATORY CONTROL  
SAMPLE RECOVERY

EPA SAMPLE NO.  
PLCS58

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
Lab Sample ID: PLCS58 LCS Lot No.: A031346  
Date Extracted 04/26/2008 Date Analyzed (1): 05/11/2008  
Instrument ID (1): A-6890A GC Column (1): RTX-CLP2 ID: 0.53 (mm)

COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% REC #	QC LIMITS
gamma-BHC (Lindane)	0.0500	0.0472	94	50-120
Heptachlor epoxide	0.0500	0.0555	111	50-150
Dieldrin	0.100	0.105	105	30-130
4,4'-DDE	0.100	0.0988	99	50-150
Endrin	0.100	0.111	111	50-120
Endosulfan sulfate	0.100	0.108	108	50-120
gamma-Chlordane	0.0500	0.0598	120	30-130

Instrument ID (2): A-6890B GC Column (2): RTX-CLP ID: 0.53 (mm)  
Date Analyzed (2): 05/11/2008

COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% REC #	QC LIMITS
gamma-BHC (Lindane)	0.0500	0.0449	90	50-120
Heptachlor epoxide	0.0500	0.0500	100	50-150
Dieldrin	0.100	0.105	105	30-130
4,4'-DDE	0.100	0.0990	99	50-150
Endrin	0.100	0.111	111	50-120
Endosulfan sulfate	0.100	0.108	108	50-120
gamma-Chlordane	0.0500	0.0536	107	30-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

LCS Recovery: 0 out of 14 outside limits

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

SOM01.1 (5/2005)



4E - FORM IV PEST  
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK58

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
Lab Sample ID: PBLK58 Lab File ID: A10336  
Matrix: (SOIL/SED/WATER) WATER Extraction: (Type) SEPF Date Extracted: 04/26/2008  
Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) N  
Date Analyzed (1): 05/11/2008 Date Analyzed (2): 05/11/2008  
Time Analyzed (1): 2136 Time Analyzed (2): 2213  
Instrument ID (1): A-6890A Instrument ID (2): A-6890B  
GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2): RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED (1)	DATE ANALYZED (2)
01	PLCS58	PLCS58	05/11/2008	05/11/2008
02	E0066	S-0875.01	05/11/2008	05/11/2008
03	E0066MS	S-0875.01MS	05/11/2008	05/11/2008
04	E0066MSD	S-0875.01MSD	05/11/2008	05/12/2008
05	E0071	S-0877.02	05/12/2008	05/12/2008
06	E0081	S-0883.02	05/12/2008	05/12/2008
07	E0080	S-0883.01	05/12/2008	05/12/2008
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COMMENTS: \_\_\_\_\_

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 10.70			DCB: 25.64		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 RESC11	A10321	5/11/2008	12:23	10.7	25.64
02 PEM11	A10322	5/11/2008	13:00	10.7	25.64
03 TOXAPH111	A10323	5/11/2008	13:37	10.7	25.64
04 TOXAPH211	A10324	5/11/2008	14:14	10.7	25.64
05 TOXAPH311	A10325	5/11/2008	14:51	10.7	25.64
06 TOXAPH411	A10326	5/11/2008	15:27	10.7	25.64
07 TOXAPH511	A10327	5/11/2008	16:04	10.7	25.64
08 INDC111	A10328	5/11/2008	16:41	10.7	25.64
09 INDC211	A10329	5/11/2008	17:18	10.7	25.64
10 INDC311	A10330	5/11/2008	17:55	10.7	25.64
11 INDC411	A10331	5/11/2008	18:32	10.7	25.64
12 INDC511	A10332	5/11/2008	19:09	10.7	25.64
13 PIBLK11	A10333	5/11/2008	19:46	10.7	25.64
14 PEM21	A10334	5/11/2008	20:22	10.7	25.64
15 PLCS58	A10335	5/11/2008	20:59	10.7	25.64
16 PBLK58	A10336	5/11/2008	21:36	10.7	25.65
17 E0066	A10337	5/11/2008	22:13	10.71	25.64
18 E0066MS	A10338	5/11/2008	22:49	10.7	25.64
19 E0066MSD	A10339	5/11/2008	23:26	10.7	25.64
20 E0071	A10340	5/12/2008	00:03	10.71	25.64
21 ZZZZZ	A10341	5/12/2008	00:40	10.7	25.64
22 E0081	A10342	5/12/2008	01:17	10.71	25.65
23 ZZZZZ	A10343	5/12/2008	01:53	10.7	25.64
24 ZZZZZ	A10344	5/12/2008	02:30	10.7	25.64
25 ZZZZZ	A10345	5/12/2008	03:07	10.71	25.65
26 PIBLK21	A10346	5/12/2008	07:21	10.73	25.67
27 INDC321	A10347	5/12/2008	07:58	10.71	25.64
28 ZZZZZ	A10348	5/12/2008	08:35	10.71	25.65
29 ZZZZZ	A10349	5/12/2008	09:12	10.71	25.65
30 ZZZZZ	A10350	5/12/2008	09:48	10.71	25.64
31 E0080	A10351	5/12/2008	10:25	10.71	25.64
32 PIBLK31	A10352	5/12/2008	11:02	10.7	25.64

QC LIMITS

TCX = Tetrachloro-m-xylene (+ 0.05 MINUTES)  
DCB = Decachlorobiphenyl (+ 0.10 MINUTES)  
# Column used to flag RT values with an asterisk.

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.96			DCB: 23.45		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	RESC12	A10321	5/11/2008 13:00	9.96	23.44
02	PEM12	A10322	5/11/2008 13:37	9.96	23.44
03	TOXAPH112	A10323	5/11/2008 14:14	9.96	23.44
04	TOXAPH212	A10324	5/11/2008 14:51	9.96	23.44
05	TOXAPH312	A10325	5/11/2008 15:27	9.96	23.44
06	TOXAPH412	A10326	5/11/2008 16:04	9.96	23.44
07	TOXAPH512	A10327	5/11/2008 16:41	9.96	23.44
08	INDC112	A10328	5/11/2008 17:18	9.96	23.45
09	INDC212	A10329	5/11/2008 17:55	9.96	23.45
10	INDC312	A10330	5/11/2008 18:32	9.96	23.45
11	INDC412	A10331	5/11/2008 19:09	9.96	23.45
12	INDC512	A10332	5/11/2008 19:46	9.96	23.44
13	PIBLK12	A10333	5/11/2008 20:22	9.96	23.44
14	PEM22	A10334	5/11/2008 20:59	9.96	23.45
15	PLCS58	A10335	5/11/2008 21:36	9.96	23.45
16	PBLK58	A10336	5/11/2008 22:13	9.96	23.45
17	E0066	A10337	5/11/2008 22:49	9.96	23.44
18	E0066MS	A10338	5/11/2008 23:26	9.96	23.44
19	E0066MSD	A10339	5/12/2008 00:03	9.96	23.44
20	E0071	A10340	5/12/2008 00:40	9.96	23.44
21	ZZZZZ	A10341	5/12/2008 01:17	9.95	23.44
22	E0081	A10342	5/12/2008 01:53	9.96	23.44
23	ZZZZZ	A10343	5/12/2008 02:30	9.96	23.44
24	ZZZZZ	A10344	5/12/2008 03:07	9.96	23.44
25	ZZZZZ	A10345	5/12/2008 07:21	9.97	23.48
26	PIBLK22	A10346	5/12/2008 07:58	9.97	23.46
27	INDC322	A10347	5/12/2008 08:35	9.96	23.45
28	ZZZZZ	A10348	5/12/2008 09:12	9.96	23.45
29	ZZZZZ	A10349	5/12/2008 09:48	9.96	23.44
30	ZZZZZ	A10350	5/12/2008 10:25	9.96	23.44
31	E0080	A10351	5/12/2008 11:02	9.96	23.44
32	PIBLK32	A10352	5/12/2008 11:39	9.96	23.44

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)  
# Column used to flag RT values with an asterisk.

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 10.70			DCB: 25.64		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 PEM31	A10353	5/12/2008	11:39	10.7	25.65
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
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23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene (+ 0.05 MINUTES)  
DCB = Decachlorobiphenyl (+ 0.10 MINUTES)  
# Column used to flag RT values with an asterisk.

8G - FORM VIII PEST  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/11/2008 05/11/2008  
Instrument ID: A-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.96			DCB: 23.45		
	EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #
01	PEM32	A10353	5/12/2008	12:16	9.96
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)  
# Column used to flag RT values with an asterisk.

1G - FORM I PEST  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PLCS58(1)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: PLCS58

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: A10335

% Moisture: \_\_\_\_\_ Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SEPF

Date Extracted: 04/26/2008

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 05/11/2008

Injection Volume: 1.0

(uL) GPC Factor: \_\_\_\_\_

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.047	J
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.056	
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.11	
72-55-9	4,4'-DDE	0.099	J
72-20-8	Endrin	0.11	
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.11	
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.060	
8001-35-2	Toxaphene	5.0	U

SOM01.2 (6/2007)

00583

1G - FORM I PEST  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
PLCS58(2)

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: PLCS58  
Sample wt/vol: 1000 (g/mL) ML Lab File ID: A10335  
% Moisture: \_\_\_\_\_ Decanted: (Y/N) N Date Received: \_\_\_\_\_  
Extraction: (Type) SEPF Date Extracted: 04/26/2008  
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/11/2008  
Injection Volume: 1.0 (uL) GPC Factor: \_\_\_\_\_ Dilution Factor: 1.0  
GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Sulfur Cleanup: (Y/N) N

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.045	J
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	
72-55-9	4,4'-DDE	0.099	J
72-20-8	Endrin	0.11	
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.11	
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.054	
8001-35-2	Toxaphene	5.0	U

SOM01.2 (6/2007)

2Q - FORM II ARO-1  
WATER AROCLOR SURROGATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066

GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2) RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	AIBLK11	97	88	96	90			0
02	AIBLK21	88	85	80	89			0
03	ABLK57	129	128	102	127			0
04	ALCS57	95	92	89	94			0
05	AIBLK31	97	96	111	99			0
06	E0066	112	102	130	143			0
07	E0066MS	69	82	82	95			0
08	E0066MSD	81	82	74	92			0
09	E0071	99	105	98	111			0
10	E0080	109	107	116	119			0
11	E0081	90	100	94	106			0
12	AIBLK41	85	88	88	89			0
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

TCX = Tetrachloro-m-xylene  
DCB = Decachlorobiphenyl

QC LIMITS  
(30-150)  
(30-150)

# Column to be used to flag recovery values  
\* Values outside of contract required QC limits  
D Surrogate diluted out



3J - FORM III ARO-1  
WATER AROCLOR MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Matrix Spike - EPA Sample No.: E0066

Instrument ID: P-6890A

GC Column: RTX-CLP2 ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Aroclor-1016	4.00	0	28.5	712 *	29-135
Aroclor-1260	4.00	0	5.34	134	29-135

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	%	QC LIMITS	
					RPD	REC.
Aroclor-1016	4.00	26.2	655 *	8	15	29-135
Aroclor-1260	4.00	4.86	122	9	20	29-135

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 2 outside limits

Spike Recovery: 2 out of 4 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

00627

3J - FORM III ARO-1  
WATER AROCLOR MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Matrix Spike - EPA Sample No.: E0066

Instrument ID: P-6890B

GC Column: RTX-CLP ID: 0.53 (mm)

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC #	QC LIMITS REC.
Aroclor-1016	4.00	0	36.8	920 *	29-135
Aroclor-1260	4.00	0	6.45	161 *	29-135

COMPOUND	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Aroclor-1016	4.00	37.9	948 *	3	15	29-135
Aroclor-1260	4.00	6.68	167 *	4	20	29-135

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 2 outside limits

Spike Recovery: 4 out of 4 outside limits

COMMENTS: \_\_\_\_\_

SOM01.1 (5/2005)

3N - FORM III ARO-3  
WATER AROCLOR LABORATORY CONTROL  
SAMPLE RECOVERY

EPA SAMPLE NO.  
ALCS57

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
Lab Sample ID: ALCS57 LCS Lot No.: A031346  
Date Extracted 04/25/2008 Date Analyzed (1): 05/07/2008  
Instrument ID (1): P-6890A GC Column (1): RTX-CLP2 ID: 0.53 (mm)

COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% REC #	QC LIMITS
Aroclor-1016	1.00	1.06	106	50-150
Aroclor-1260	1.00	1.03	103	50-150

Instrument ID (2): P-6890B GC Column (2): RTX-CLP ID: 0.53 (mm)  
Date Analyzed (2): 05/07/2008

COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% REC #	QC LIMITS
Aroclor-1016	1.00	1.17	117	50-150
Aroclor-1260	1.00	1.24	124	50-150

# Column to be used to flag recovery and RPD values with an asterisk  
\* Values outside of QC limits

LCS Recovery: 0 out of 4 outside limits

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

SOM01.1 (5/2005)

00629

4F - FORM IV ARO  
AROCLOR METHOD BLANK SUMMARY

EPA SAMPLE NO.  
ABLK57

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
Lab Sample ID: ABLK57 Lab File ID: P17663  
Matrix: (SOIL/SED/WATER) WATER Extraction: (Type) SEPF Date Extracted: 04/25/2008  
Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) N  
Acid Cleanup: (Y/N) Y  
Date Analyzed (1): 05/07/2008 Date Analyzed (2): 05/07/2008  
Time Analyzed (1): 1026 Time Analyzed (2): 1103  
Instrument ID (1): P-6890A Instrument ID (2): P-6890B  
GC Column (1): RTX-CLP2 ID: 0.53 (mm) GC Column (2): RTX-CLP ID: 0.53 (mm)

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED (1)	DATE ANALYZED (2)
01	ALCS57	ALCS57	05/07/2008	05/07/2008
02	E0066	S-0875.01	05/07/2008	05/07/2008
03	E0066MS	S-0875.01MS	05/07/2008	05/07/2008
04	E0066MSD	S-0875.01MSD	05/07/2008	05/07/2008
05	E0071	S-0877.02	05/07/2008	05/07/2008
06	E0080	S-0883.01	05/07/2008	05/07/2008
07	E0081	S-0883.02	05/07/2008	05/07/2008
08				
09				
10				
11				
12				
13				
14				
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21				
22				
23				
24				
25				
26				

COMMENTS: \_\_\_\_\_

8H - FORM VIII ARO  
AROCOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/06/2008 05/06/2008  
Instrument ID: P-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 8.07			DCB: 21.50		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 AR1660111	P17632	5/6/2008	11:09	8.08	21.5
02 AR1660211	P17633	5/6/2008	11:46	8.07	21.5
03 AR1660311	P17634	5/6/2008	12:22	8.07	21.5
04 AR1660411	P17635	5/6/2008	12:59	8.07	21.5
05 AR1660511	P17636	5/6/2008	13:36	8.07	21.5
06 AR1221311	P17637	5/6/2008	14:12	8.07	21.5
07 AR1232311	P17638	5/6/2008	14:49	8.07	21.5
08 AR1242311	P17639	5/6/2008	15:25	8.07	21.5
09 AR1248311	P17640	5/6/2008	16:02	8.07	21.5
10 AR1254311	P17641	5/6/2008	16:38	8.07	21.5
11 AR1262311	P17642	5/6/2008	17:15	8.07	21.5
12 AR1268311	P17643	5/6/2008	17:51	8.08	21.5
13 AIBLK11	P17644	5/6/2008	18:28	8.07	21.5
14 AIBLK21	P17661	5/7/2008	08:29	8.08	21.51
15 AR1660321	P17662	5/7/2008	09:05	8.08	21.51
16 ABLK57	P17663	5/7/2008	10:26	8.09	21.52
17 ALCS57	P17664	5/7/2008	11:03	8.07	21.51
18 ZZZZZ	P17665	5/7/2008	11:39	8.08	21.51
19 AIBLK31	P17666	5/7/2008	12:16	8.07	21.51
20 AR1660331	P17667	5/7/2008	12:52	8.07	21.51
21 ZZZZZ	P17668	5/7/2008	13:29	8.07	21.51
22 ZZZZZ	P17669	5/7/2008	14:06	8.07	21.51
23 ZZZZZ	P17670	5/7/2008	14:42	8.07	21.51
24 ZZZZZ	P17671	5/7/2008	15:19	8.07	21.51
25 E0066	P17672	5/7/2008	15:55	8.07	21.51
26 E0066MS	P17673	5/7/2008	16:32	8.07	21.51
27 E0066MSD	P17674	5/7/2008	17:08	8.07	21.51
28 E0071	P17675	5/7/2008	17:45	8.07	21.51
29 E0080	P17676	5/7/2008	18:21	8.07	21.51
30 E0081	P17677	5/7/2008	18:58	8.07	21.51
31 ZZZZZ	P17678	5/7/2008	19:35	8.07	21.51
32 AIBLK41	P17679	5/7/2008	20:11	8.07	21.51

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8H - FORM VIII ARO  
AROCOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
GC Column: RTX-CLP2 ID: 0.53 (mm) Init. Calib. Date(s): 05/06/2008 05/06/2008  
Instrument ID: P-6890A

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 8.07			DCB: 21.50		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 AR1660341	P17680	5/7/2008	20:48	8.07	21.51
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8H - FORM VIII ARO  
AROCOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/06/2008 05/06/2008  
Instrument ID: P-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.11			DCB: 22.00		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 AR1660112	P17632	5/6/2008	11:46	9.12	22
02 AR1660212	P17633	5/6/2008	12:22	9.11	22
03 AR1660312	P17634	5/6/2008	12:59	9.11	22.01
04 AR1660412	P17635	5/6/2008	13:36	9.11	22
05 AR1660512	P17636	5/6/2008	14:12	9.11	22.01
06 AR1221312	P17637	5/6/2008	14:49	9.11	22.01
07 AR1232312	P17638	5/6/2008	15:25	9.12	22
08 AR1242312	P17639	5/6/2008	16:02	9.11	22.01
09 AR1248312	P17640	5/6/2008	16:38	9.11	22.01
10 AR1254312	P17641	5/6/2008	17:15	9.12	22.01
11 AR1262312	P17642	5/6/2008	17:51	9.12	22.01
12 AR1268312	P17643	5/6/2008	18:28	9.12	22.01
13 AIBLK12	P17644	5/6/2008	19:04	9.11	22.01
14 AIBLK22	P17661	5/7/2008	09:05	9.11	22
15 AR1660322	P17662	5/7/2008	09:42	9.12	22
16 ABLK57	P17663	5/7/2008	11:03	9.12	22.01
17 ALCS57	P17664	5/7/2008	11:39	9.12	22
18 ZZZZZ	P17665	5/7/2008	12:16	9.12	22.01
19 AIBLK32	P17666	5/7/2008	12:52	9.12	22
20 AR1660332	P17667	5/7/2008	13:29	9.12	22
21 ZZZZZ	P17668	5/7/2008	14:06	9.12	22.01
22 ZZZZZ	P17669	5/7/2008	14:42	9.12	22
23 ZZZZZ	P17670	5/7/2008	15:19	9.12	22
24 ZZZZZ	P17671	5/7/2008	15:55	9.11	22
25 E0066	P17672	5/7/2008	16:32	9.12	22.01
26 E0066MS	P17673	5/7/2008	17:08	9.11	22
27 E0066MSD	P17674	5/7/2008	17:45	9.11	22
28 E0071	P17675	5/7/2008	18:21	9.11	22
29 E0080	P17676	5/7/2008	18:58	9.11	22
30 E0081	P17677	5/7/2008	19:35	9.11	22
31 ZZZZZ	P17678	5/7/2008	20:11	9.11	22
32 AIBLK42	P17679	5/7/2008	20:48	9.11	22

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.

8H - FORM VIII ARO  
AROCOR ANALYTICAL SEQUENCE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW05032  
Lab Code: KAP Case No.: 37407 Mod. Ref No.: \_\_\_\_\_ SDG No.: E0066  
GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/06/2008 05/06/2008  
Instrument ID: P-6890B

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs and LCSs IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 9.11			DCB: 22.00		
EPA SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01 AR1660342	P17680	5/7/2008	21:24	9.12	22
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene ( ± 0.05 MINUTES)  
DCB = Decachlorobiphenyl ( ± 0.10 MINUTES)

# Column used to flag RT values with an asterisk.



1H - FORM I ARO  
 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ALCS57(1)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: ALCS57

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: P17664

% Moisture: \_\_\_\_\_ Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SEPF

Date Extracted: 04/25/2008

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 05/07/2008

Injection Volume: 1.0 (uL) GPC Factor: \_\_\_\_\_ Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.1	
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

SOM01.2 (6/2007)

00725

1H - FORM I ARO  
 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ALCS57(2)

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW05032

Lab Code: KAP

Case No.: 37407

Mod. Ref No.: \_\_\_\_\_

SDG No.: E0066

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: ALCS57

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: P17664

% Moisture: \_\_\_\_\_ Decanted: (Y/N) N

Date Received: \_\_\_\_\_

Extraction: (Type) SEPF

Date Extracted: 04/25/2008

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 05/07/2008

Injection Volume: 1.0 (uL) GPC Factor: \_\_\_\_\_ Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: \_\_\_\_\_

Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.2	
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.2	
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

SOM01.2 (6/2007)

00726

Data Path : C:\MSDCHEM\1\data\Signal #1) C:\MSDCHEM\1\data\Signal #2)  
 Data File : A10337.D(Signal #1) A10337.D(Signal #2)  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 InstName : A-6890A(Signal #1) A-6890B(Signal # 2)  
 Acq On : 05/11/08 22:13 (Signal #1); 05/11/08 22:49 (Signal #2)  
 Operator : KVR(Signal #1) KVR(Signal #2)  
 Sample : E0066 (Sig #1); E0066 (Sig #2)  
 Misc : S-0875.01 1000ML/10ML (Sig #1); S-0875.01 1000ML/10ML (Sig #2)  
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
 Integration File signal 2: EVENTS2.E  
 Quant Time: May 12 09:22:04 2008  
 Quant Method : C:\MSDCHEM\1\METHODS\CPEST-10330.M  
 Quant Title :  
 QLast Update : Sun May 11 21:49:47 2008  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 uL  
 Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
 Signal #1 Info : 30mLn, 0.53mm I.D Signal #2 Info : 30m Ln, 0.53mm ,I.D

*Key*  
*05/11/08*

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
-----						
System Monitoring Compounds						
1) S Tetrachloro-m-xy	10.71	9.96	7715.8E6	15267.9E6	78.089	68.220
Spiked Amount	60.000			Recovery	= 130.15%	113.70%
22) S Decachlorobiphen	25.64	23.44	12005.7E6	38429.4E6	201.959	236.742
Spiked Amount	120.000			Recovery	= 168.30%	197.29%

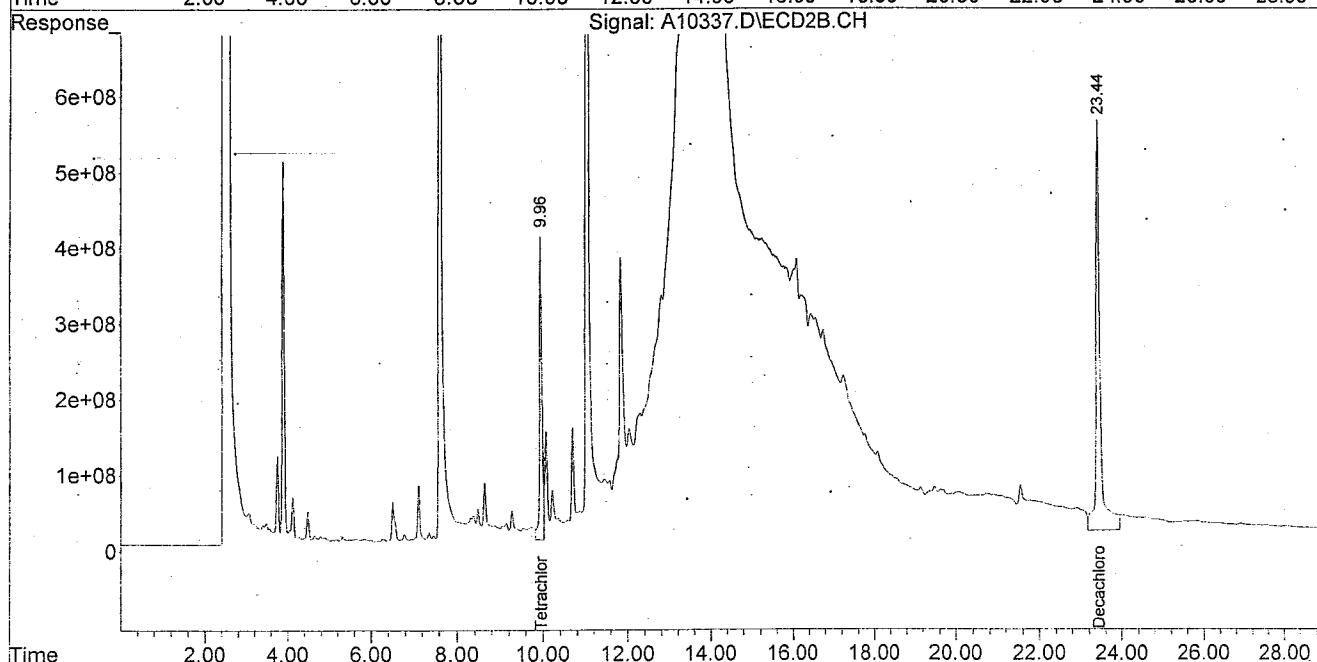
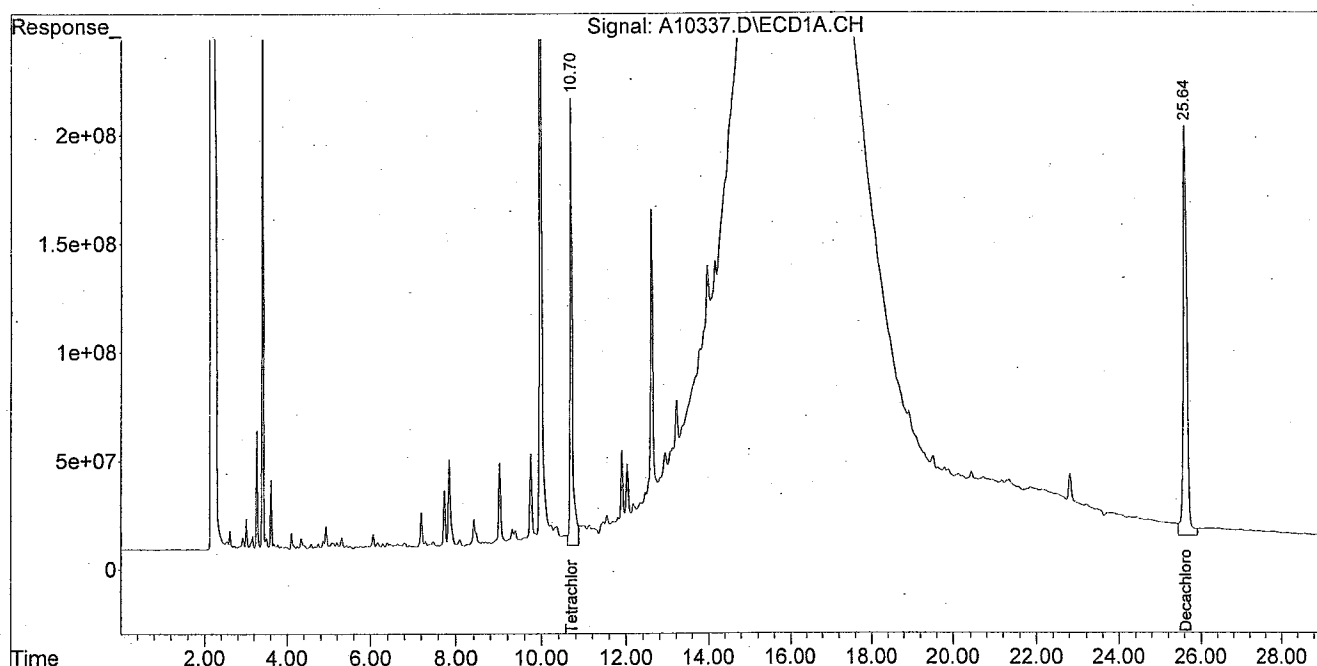
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
 Data File : A10337.D (Signal #1) A10337.D (Signal #2)  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 InstName : A-6890A (Signal #1) A-6890B (Signal #2)  
 Acq On : 05/11/08 22:13 (Signal #1); 05/11/08 22:49 (Signal #2)  
 Operator : KVR (Signal #1) KVR (Signal #2)  
 Sample : E0066 (Sig #1); E0066 (Sig #2)  
 Misc : S-0875.01 1000ML/10ML (Sig #1); S-0875.01 1000ML/10ML (Sig #2)  
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
 Integration File signal 2: EVENTS2.E  
 Quant Time: May 12 09:22:04 2008  
 Quant Method : C:\MSDCHEM\1\METHODS\CPEST-10330.M  
 Quant Title :  
 QLast Update : Sun May 11 21:49:47 2008  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 uL  
 Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
 Signal #1 Info : 30mLn, 0.53mm I.D Signal #2 Info : 30m Ln, 0.53mm ,I.D



Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
 Data File : A10338.D(Signal #1) A10338.D(Signal #2)  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 InstName : A-6890A(Signal #1) A-6890B(Signal # 2)  
 Acq On : 05/11/08 22:49 (Signal #1); 05/11/08 23:26 (Signal #2)  
 Operator : KVR(Signal #1) KVR(Signal #2)  
 Sample : E0066MS (Sig #1); E0066MS (Sig #2)  
 Misc : S-0875.01MS 1000ML/10ML (Sig #1); S-0875.01MS 1000ML/10ML (Sig #2)

ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
 Integration File signal 2: EVENTS2.E  
 Quant Time: May 12 08:23:16 2008  
 Quant Method : C:\MSDCHEM\1\METHODS\CPEST-10330.M  
 Quant Title :  
 QLast Update : Sun May 11 21:49:47 2008  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 uL  
 Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
 Signal #1 Info : 30mLn, 0.53mm I.D Signal #2 Info : 30m Ln, 0.53mm ,I.D

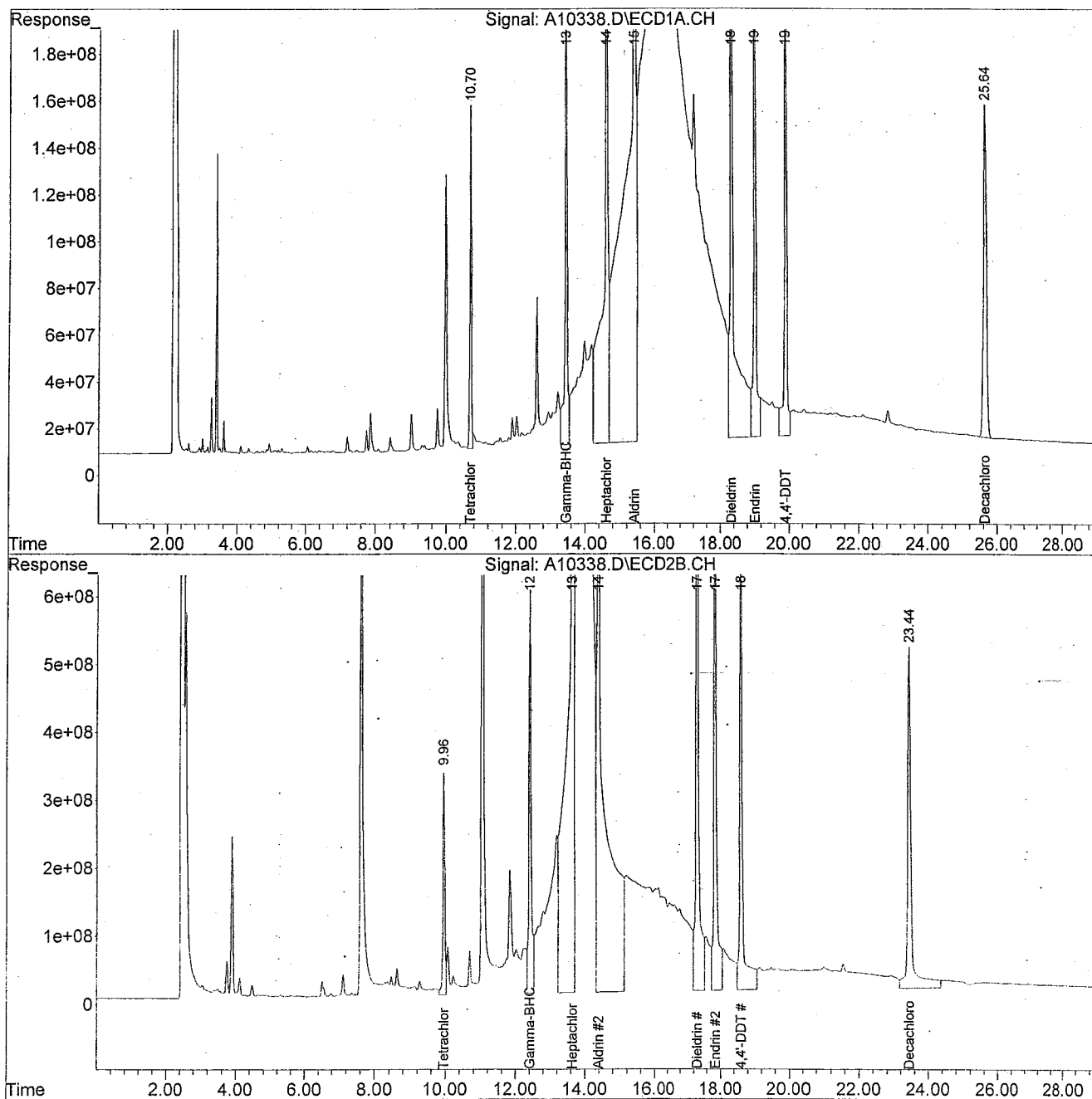
Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
-----						
System Monitoring Compounds						
1) S Tetrachloro-m-xy	10.70	9.96	4448.2E6	12238.9E6	45.019	54.686
Spiked Amount	60.000		Recovery	=	75.03%	91.14%
22) S Decachlorobiphen	25.64	23.44	8456.7E6	36502.8E6	142.259	224.873 #
Spiked Amount	120.000		Recovery	=	118.55%	187.39%
Target Compounds						
3) Gamma-BHC (Linda	13.47	12.42	8682.9E6	27862.6E6	60.305	78.818 #
6) Heptachlor	14.61	13.65	20703.3E6	126159.0E6	141.645	327.546 #
7) Aldrin	15.43	14.39	57146.8E6	132833.2E6	457.452	384.636
13) Dieldrin	18.33	17.31	21550.2E6	51604.5E6	195.435	161.327
14) Endrin	19.03	17.84	10831.4E6	41138.7E6	125.601	166.303 #
17) 4,4'-DDT	19.90	18.61	9020.3E6	37980.6E6	108.667	143.592 #
-----						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
Data File : A10338.D (Signal #1) A10338.D (Signal #2)  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
InstName : A-6890A (Signal #1) A-6890B (Signal #2)  
Acq On : 05/11/08 22:49 (Signal #1); 05/11/08 23:26 (Signal #2)  
Operator : KVR (Signal #1) KVR (Signal #2)  
Sample : E0066MS (Sig #1); E0066MS (Sig #2)  
Misc : S-0875.01MS 1000ML/10ML (Sig #1); S-0875.01MS 1000ML/10ML (Sig #2)  
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
Integration File signal 2: EVENTS2.E  
Quant Time: May 12 08:23:16 2008  
Quant Method : C:\MSDCHEM\1\METHODS\CPEST-10330.M  
Quant Title :  
QLast Update : Sun May 11 21:49:47 2008  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 uL  
Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
Signal #1 Info : 30mLn, 0.53mm I.D Signal #2 Info : 30m Ln, 0.53mm ,I.D



Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
Data File : A10339.D (Signal #1) A10339.D (Signal #2)  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
InstName : A-6890A (Signal #1) A-6890B (Signal #2)  
Acq On : 05/11/08 23:26 (Signal #1); 05/12/08 00:03 (Signal #2)  
Operator : KVR (Signal #1) KVR (Signal #2)  
Sample : E0066MSD (Sig #1); E0066MSD (Sig #2)  
Misc : S-0875.01MSD 1000ML/10ML (Sig #1); S-0875.01MSD 1000ML/10ML (Sig #2)  
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
Integration File signal 2: EVENTS2.E  
Quant Time: May 12 08:24:08 2008  
Quant Method : C:\MSDCHEM\1\METHODS\CPEST-10330.M  
Quant Title :  
QLast Update : Sun May 11 21:49:47 2008  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 uL  
Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
Signal #1 Info : 30mLn, 0.53mm I.D Signal #2 Info : 30m Ln, 0.53mm ,I.D

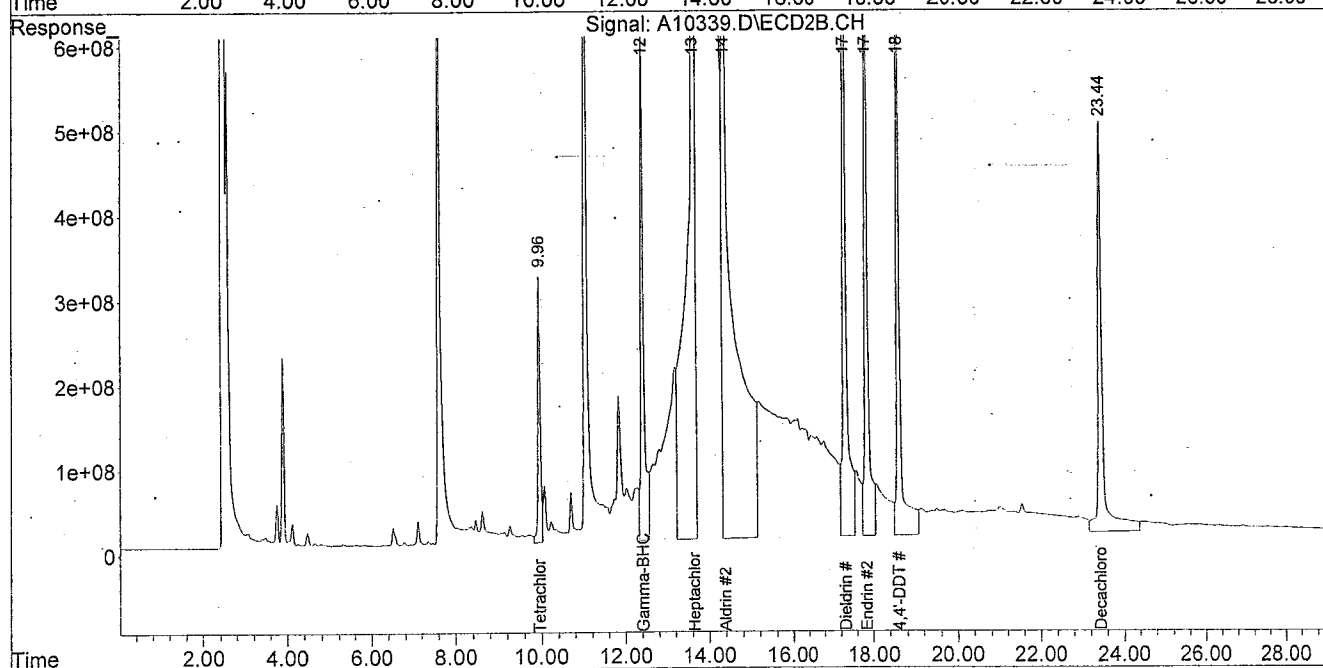
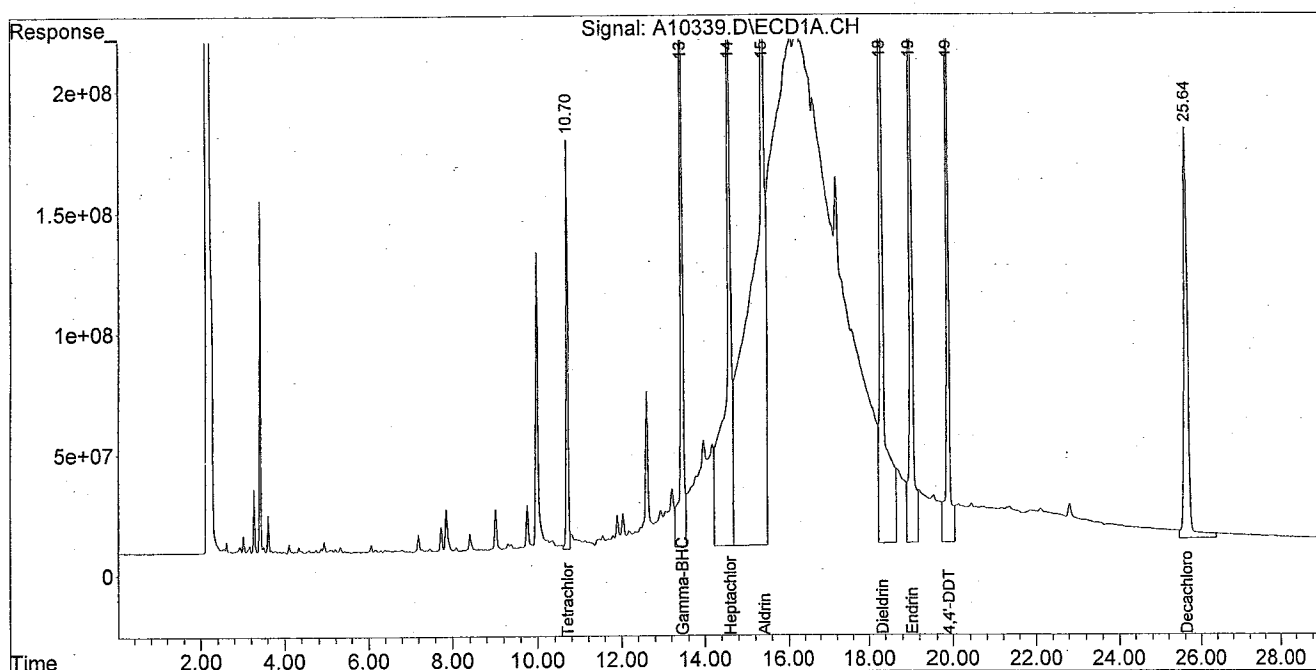
Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
-----						
System Monitoring Compounds						
1) S Tetrachloro-m-xy	10.70	9.96	5194.3E6	11936.5E6	52.570	53.335
Spiked Amount	60.000		Recovery	=	87.62%	88.89%
22) S Decachlorobiphen	25.64	23.44	11243.7E6	36075.9E6	189.142	222.244
Spiked Amount	120.000		Recovery	=	157.62%	185.20%
Target Compounds						
3) Gamma-BHC (Linda	13.47	12.42	10989.2E6	29027.5E6	76.323	82.113
6) Heptachlor	14.61	13.65	23119.8E6	115324.3E6	158.177	299.416 #
7) Aldrin	15.43	14.39	58365.6E6	141142.7E6	467.208	408.697
13) Dieldrin	18.33	17.31	22852.3E6	52443.7E6	207.244	163.951
14) Endrin	19.03	17.84	14243.4E6	41730.4E6	165.168	168.695
17) 4,4'-DDT	19.90	18.61	12616.1E6	38361.0E6	151.985	145.031
-----						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
 Data File : A10339.D (Signal #1) A10339.D (Signal #2)  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 InstName : A-6890A (Signal #1) A-6890B (Signal #2)  
 Acq On : 05/11/08 23:26 (Signal #1); 05/12/08 00:03 (Signal #2)  
 Operator : KVR (Signal #1) KVR (Signal #2)  
 Sample : E0066MSD (Sig #1); E0066MSD (Sig #2)  
 Misc : S-0875.01MSD 1000ML/10ML (Sig #1); S-0875.01MSD 1000ML/10ML (S:  
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
 Integration File signal 2: EVENTS2.E  
 Quant Time: May 12 08:24:08 2008  
 Quant Method : C:\MSDCHEM\1\METHODS\CPEST-10330.M  
 Quant Title :  
 QLast Update : Sun May 11 21:49:47 2008  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 uL  
 Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
 Signal #1 Info : 30mLn, 0.53mm I.D Signal #2 Info : 30m Ln, 0.53mm , I.D





Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
Data File : P17672.D (Signal #1) P17672.D (Signal #2)  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
InstName : P-6890A (Signal #1) P-6890B (Signal #2)  
Acq On : 05/07/08 15:55 (Signal #1); 05/07/08 16:32 (Signal #2)  
Operator : KVR (Signal #1) KVR (Signal #2)  
Sample : E0066 (Sig #1); E0066 (Sig #2)  
Misc : S-0875.01 1000ML/10ML (Sig #1); S-0875.01 1000ML/10ML (Sig #2)  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
Integration File signal 2: EVENTS2.E  
Quant Time: May 08 16:23:57 2008  
Quant Method : C:\MSDCHEM\1\METHODS\AR1660-17634.M  
Quant Title : CLP PCB'S ANALYSIS BY CLP SOM1.1  
QLast Update : Thu May 08 16:21:20 2008  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL  
Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
Signal #1 Info : 30m Len, 0.53mm I.D Signal #2 Info : 30m Len, 0.53mm I.D

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
-----						
System Monitoring Compounds						
1) S Tetrachloro-m-xy	8.07	9.12	1071.2E6	13690.1E6	67.269	61.466
Spiked Amount	60.000		Recovery	=	112.12%	102.44%
8) s Decachlorobiphen	21.51	22.01	2105.1E6	38902.1E6	156.517	171.445
Spiked Amount	120.000		Recovery	=	130.43%	142.87%

Target Compounds

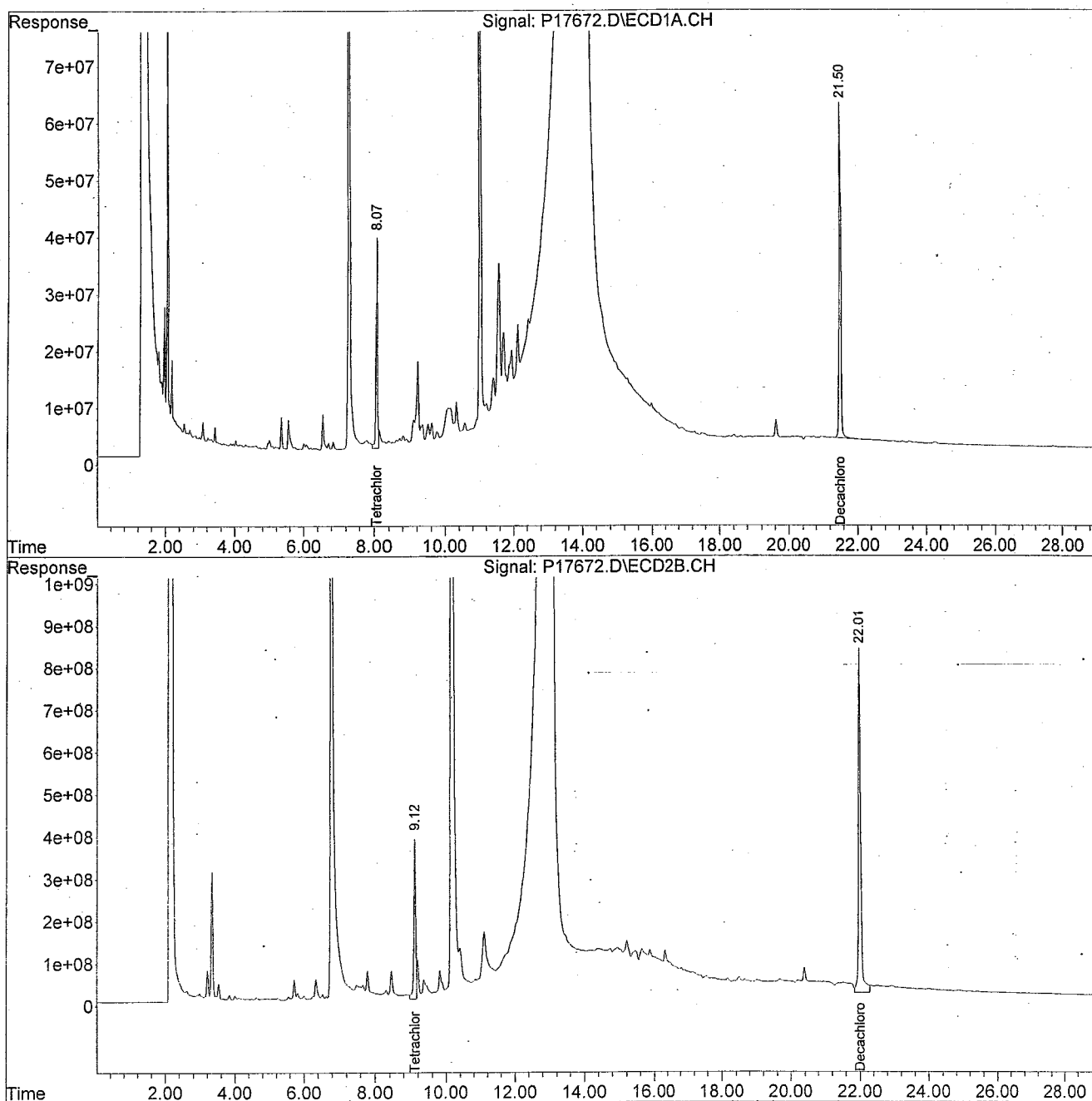
-----

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
Data File : P17672.D (Signal #1) P17672.D (Signal #2)  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
InstName : A-6890A (Signal #1) A-6890B (Signal #2)  
Acq On : 05/07/08 15:55 (Signal #1); 05/07/08 16:32 (Signal #2)  
Operator : KVR (Signal #1) KVR (Signal #2)  
Sample : E0066 (Sig #1); E0066 (Sig #2)  
Misc : S-0875.01 1000ML/10ML (Sig #1); S-0875.01 1000ML/10ML (Sig #2)  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
Integration File signal 2: EVENTS2.E  
Quant Time: May 08 16:23:57 2008  
Quant Method : C:\MSDCHEM\1\METHODS\AR1660-17634.M  
Quant Title : CLP PCB'S ANALYSIS BY CLP SOM1.1  
QLast Update : Thu May 08 16:21:20 2008  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL  
Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
Signal #1 Info : 30m Len, 0.53mm I.D Signal #2 Info : 30m Len, 0.53mm I.D



Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
 Data File : P17673.D (Signal #1) P17673.D (Signal #2)  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 InstName : P-6890A (Signal #1) P-6890B (Signal #2)  
 Acq On : 05/07/08 16:32 (Signal #1); 05/07/08 17:08 (Signal #2)  
 Operator : KVR (Signal #1) KVR (Signal #2)  
 Sample : E0066MS (Sig #1); E0066MS (Sig #2)  
 Misc : S-0875.01MS 1000ML/10ML (Sig #1); S-0875.01MS 1000ML/10ML (Sig #2)  
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
 Integration File signal 2: EVENTS2.E  
 Quant Time: May 08 16:24:10 2008  
 Quant Method : C:\MSDCHEM\1\METHODS\AR1660-17634.M  
 Quant Title : CLP PCB'S ANALYSIS BY CLP SOM1.1  
 QLast Update : Thu May 08 16:21:20 2008  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

*05/15/08*

Volume Inj. : 1uL  
 Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
 Signal #1 Info : 30m Len, 0.53mm I.D Signal #2 Info : 30m Len, 0.53mm I.D

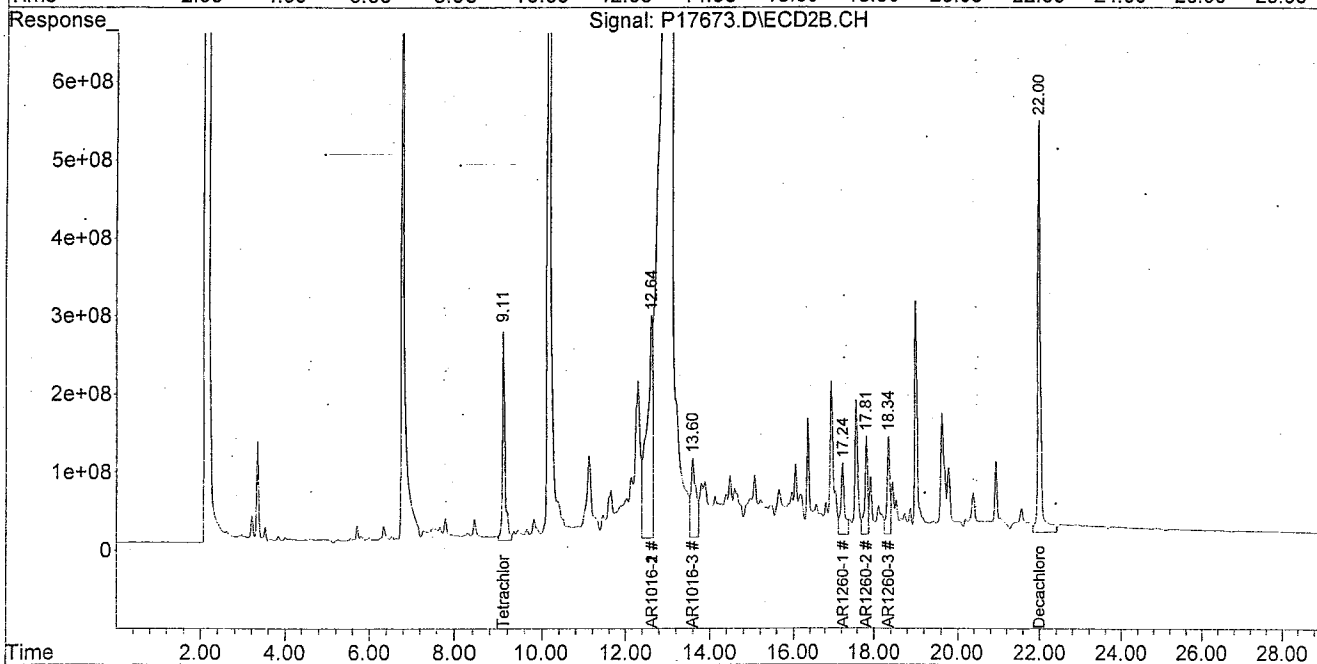
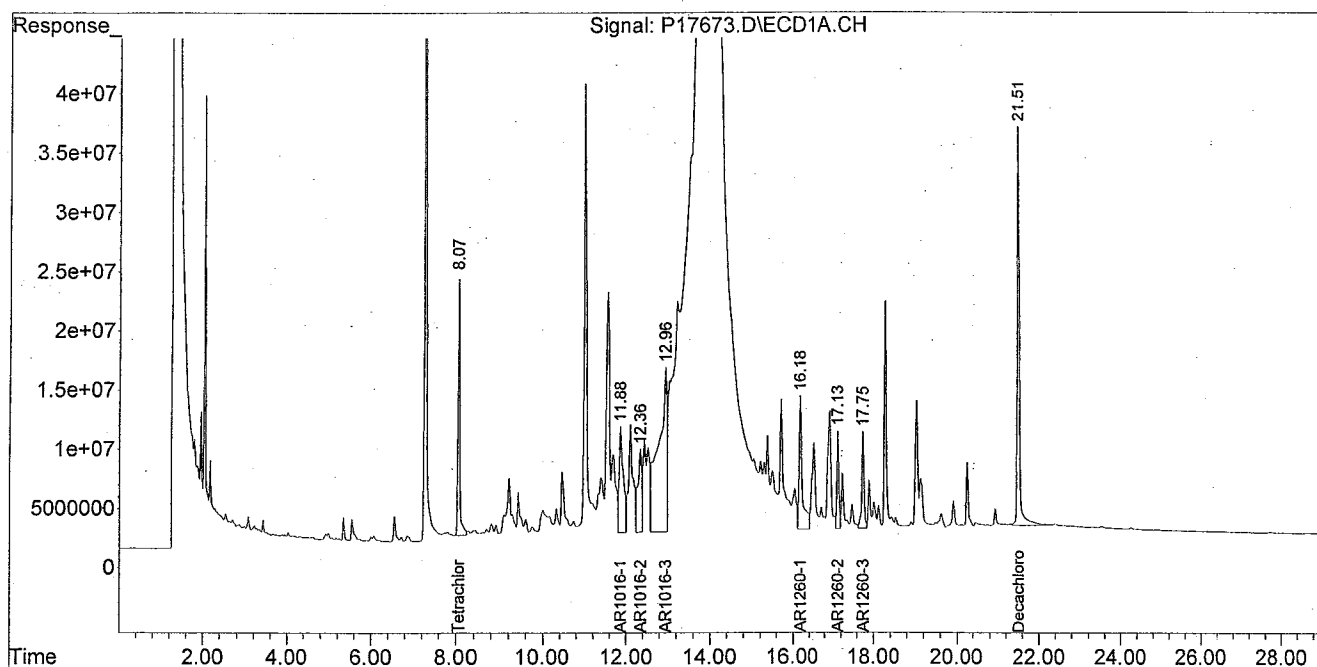
Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
-----						
System Monitoring Compounds						
1) S Tetrachloro-m-xy	8.07	9.11	658.6E6	11009.7E6	41.361	49.431
Spiked Amount	60.000		Recovery	=	68.93%	82.38%
8) s Decachlorobiphen	21.51	22.00	1331.0E6	25960.6E6	98.963	114.411
Spiked Amount	120.000		Recovery	=	82.47%	95.34%
Target Compounds						
2) AR1016-1	11.88	12.64	655.3E6	28135.9E6	1170.191	3996.010 #
3) AR1016-2	12.36	12.64	464.8E6	28135.9E6	1775.404	5914.254 #
4) AR1016-3	12.96	13.60	1998.4E6	8380.5E6	5613.438	1126.191 #
5) AR1260-1	16.19	17.23	609.7E6	5862.1E6	703.943	780.789
6) AR1260-2	17.13	17.81	292.9E6	6167.8E6	448.947	587.650 #
7) AR1260-3	17.75	18.34	304.9E6	5632.5E6	449.840	566.179 #
-----						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
 Data File : P17673.D (Signal #1) P17673.D (Signal #2)  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 InstName : A-6890A (Signal #1) A-6890B (Signal #2)  
 Acq On : 05/07/08 16:32 (Signal #1); 05/07/08 17:08 (Signal #2)  
 Operator : KVR (Signal #1) KVR (Signal #2)  
 Sample : E0066MS (Sig #1); E0066MS (Sig #2)  
 Misc : S-0875.01MS 1000ML/10ML (Sig #1); S-0875.01MS 1000ML/10ML  
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
 Integration File signal 2: EVENTS2.E  
 Quant Time: May 08 16:24:10 2008  
 Quant Method : C:\MSDCHEM\1\METHODS\AR1660-17634.M  
 Quant Title : CLP PCB'S ANALYSIS BY CLP SOM1.1  
 QLast Update : Thu May 08 16:21:20 2008  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL  
 Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
 Signal #1 Info : 30m Len, 0.53mm I.D Signal #2 Info : 30m Len, 0.53mm I.D



Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
 Data File : P17674.D (Signal #1) P17674.D (Signal #2)  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 InstName : P-6890A (Signal #1) P-6890B (Signal #2)  
 Acq On : 05/07/08 17:08 (Signal #1); 05/07/08 17:45 (Signal #2)  
 Operator : KVR (Signal #1) KVR (Signal #2)  
 Sample : E0066MSD (Sig #1); E0066MSD (Sig #2)  
 Misc : S-0875.01MSD 1000ML/10ML (Sig #1); S-0875.01MSD 1000ML/10ML (Sig #2)  
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
 Integration File signal 2: EVENTS2.E  
 Quant Time: May 08 16:24:46 2008  
 Quant Method : C:\MSDCHEM\1\METHODS\AR1660-17634.M  
 Quant Title : CLP PCB'S ANALYSIS BY CLP SOM1.1  
 QLast Update : Thu May 08 16:21:20 2008  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL  
 Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
 Signal #1 Info : 30m Len, 0.53mm I.D Signal #2 Info : 30m Len, 0.53mm I.D

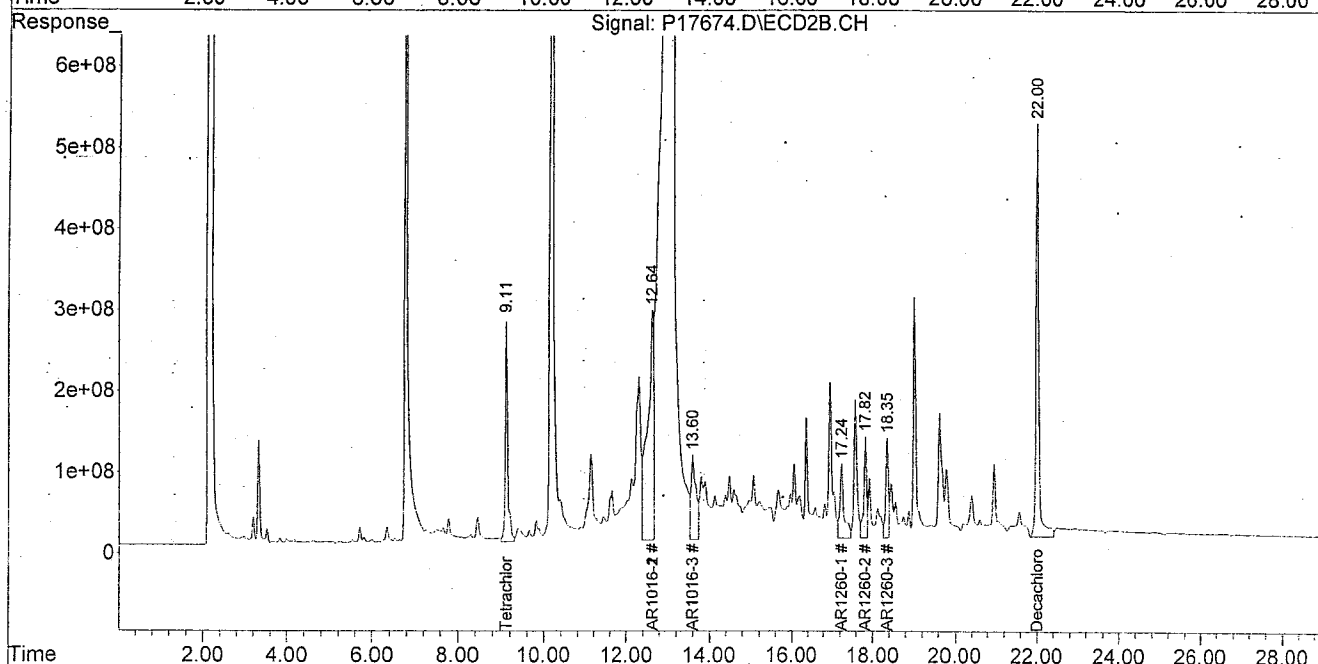
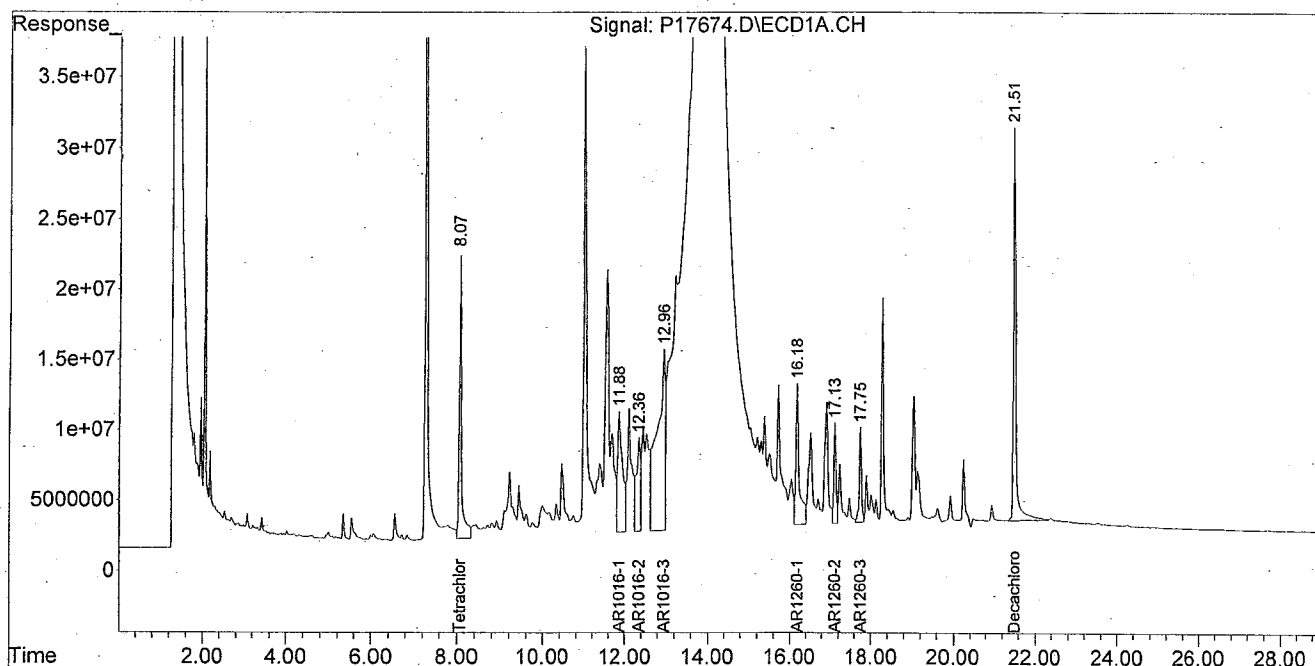
Compound	RT#1	RT#2	Resp#1	Resp#2	ng/mL	ng/mL
-----						
System Monitoring Compounds						
1) S Tetrachloro-m-xy	8.07	9.11	773.7E6	10978.1E6	48.586	49.290
Spiked Amount	60.000		Recovery	=	80.98%	82.15%
8) s Decachlorobiphen	21.51	22.00	1187.8E6	25110.2E6	88.316	110.663 #
Spiked Amount	120.000		Recovery	=	73.60%	92.22%
Target Compounds						
2) AR1016-1	11.88	12.64	703.5E6	28944.2E6	1256.141	4110.807 #
3) AR1016-2	12.36	12.64	434.2E6	28944.2E6	1658.621	6084.159 #
4) AR1016-3	12.96	13.60	1761.0E6	8713.4E6	4946.646	1170.931 #
5) AR1260-1	16.19	17.24	582.9E6	6538.0E6	672.991	870.818 #
6) AR1260-2	17.13	17.82	265.3E6	6063.1E6	406.675	577.676 #
7) AR1260-3	17.75	18.35	256.4E6	5532.7E6	378.356	556.149 #
-----						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\MSDCHEM\1\data\ (Signal #1) C:\MSDCHEM\1\data\ (Signal #2)  
 Data File : P17674.D (Signal #1) P17674.D (Signal #2)  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 InstName : A-6890A (Signal #1) A-6890B (Signal #2)  
 Acq On : 05/07/08 17:08 (Signal #1); 05/07/08 17:45 (Signal #2)  
 Operator : KVR (Signal #1) KVR (Signal #2)  
 Sample : E0066MSD (Sig #1); E0066MSD (Sig #2)  
 Misc : S-0875.01MSD 1000ML/10ML (Sig #1); S-0875.01MSD 1000ML/10ML  
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: EVENTS.E  
 Integration File signal 2: EVENTS2.E  
 Quant Time: May 08 16:24:46 2008  
 Quant Method : C:\MSDCHEM\1\METHODS\AR1660-17634.M  
 Quant Title : CLP PCB'S ANALYSIS BY CLP SOM1.1  
 QLast Update : Thu May 08 16:21:20 2008  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL  
 Signal #1 Phase : Rtx-CLP2 Signal #2 Phase: Rtx-CLP  
 Signal #1 Info : 30m Len, 0.53mm I.D Signal #2 Info : 30m Len, 0.53mm I.D



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
ESD Central Regional Laboratory  
Data Tracking Form for Contract Samples

Sample Delivery Group: E0066 CERCLIS No: ILN000509228

Case No: 37407 Site Name/Location: LAKE CALUMET SMELTING (IL)

Contractor or EPA Lab: Kap Technologies Data User: IEPA

No. of Samples: 6 Date Sampled or Date Received: 19 May 08

Have Chain-of-Custody records been received? Yes ☒ No ☐

Have traffic reports or packing lists been received? Yes ☒ No ☐

If no, are traffic report or packing list numbers written on the Chain-of-Custody Record?

Yes ☐ No ☐

If no, which traffic report or packing list numbers are missing?

Are basic data forms in? Yes ☒ No ☐

No of samples claimed: 6 No. of samples received: \_\_\_\_\_

Received by: pdavis Date: 19 May 08

Received by LSSS: pdavis Date: 20 May 08

Review started: 6/3/08 Reviewer Signature: [Signature]

Total time spent on review: 11.0 Date review completed: 6/4/08

Copied by: A. C. Harvey Date: June 17, 2008

Mailed to user by: pdavis Date: 19 June 08

**DATA USER:**

Please fill in the blanks below and return this form to:

Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: \_\_\_\_\_ Date: \_\_\_\_\_

Data review received by: \_\_\_\_\_ Date: \_\_\_\_\_

Inorganic Data Complete

☐ Suitable for Intended Purpose ☒ if OK

Organic Data Complete

☐ Suitable for Intended Purpose ☒ if OK

Dioxin data Complete

☐ Suitable for Intended Purpose ☒ if OK

SAS Data Complete

☐ Suitable for Intended Purpose ☒ if OK

**PROBLEMS:** Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Date: \_\_\_\_\_

ESAT Controlled Number: ESAT5.17.00035-pd 3 June 08

DATE: June 3, 2008

IEPA

**Attn: Mr. Mark Wagner**

1001 North Grand Avenue East

P.O. Box 19276

Springfield, IL 62794-9276

SITE NAME: Lake Calumet Smelting & Refining (IL)

<u>CASE NO.</u>	<u>LAB</u>	<u>SAMPLES</u>	<u>SDG</u>	<u>MATRIX</u>
37407	ChemTech	7	ME0066	water

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

**Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.**

Data Received by: \_\_\_\_\_ Date: \_\_\_\_\_

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

Received by Data Management Coordinator, CRL for file.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

FROM: **U.S. EPA - Region 5**  
Sylvia Griffin  
Central Regional Laboratory  
536 S. Clark, 10th Floor  
Chicago, IL 60605

Sent By: Pat Johnson  
Data Coordinator  
ESAT Region 5 **TechLaw**

**RECEIVED**

JUN 06 2008

IEPA-BOL-FSRS



# Controlled Document

Regional Transmittal Form # ESAT5.15.00015

ack  
6-2-08

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE: May 28, 2008

SUBJECT: Review of Data  
Received for review on May 14, 2008

FROM: Stephen L. Ostrodka, Chief (SRT-4J)  
Superfund Field Services Section

TO: Data User: IEPA

We have reviewed the data by CADRE for the following case:

SITE NAME: Lake Calumet Smelting and Refinery (IL)

CASE NUMBER: 37407 SDG NUMBER: ME0066

Number and Type of Samples: 7 water samples and 10 soil samples

Sample Numbers: ME0066, ME0069, ME0071 thru ME0083, ME0085 thru ME0086

Laboratory: ChemTech Hrs. for Review: 15 + 3.5 6/28/08

Following are our findings:

CC: Howard Pham  
Region 5 TOPO  
Mail Code: SRT-4J

**RECEIVED**

JUN 06 2008

IEPA-BOL-FSRS

**Below is a summary of the out-of-control audits and the possible effects on the data for this case:**

Seven (7) water samples and ten (10) soil samples numbered ME0066, ME0069, ME0071 thru ME0083 and ME0085 thru ME0086 were collected on April 22-23, 2008. The lab received the samples on April 23-25, 2008 in good condition. All samples were analyzed for total metals, mercury, and cyanide. All samples were analyzed using the CLP SOW ILM05.4 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

Percent solids data were presented on a computer generated spreadsheet. Percent solids calculations used by the laboratory were frequently rounded incorrectly. Five out of the ten values reported by the laboratory were rounded up when they should not have been. The incorrectly reported percent solids results can result in low biased sample results. The reported results were corrected on samples ME0072, ME0073, ME0076, ME0077 and ME0082 by this reviewer.

### 1. HOLDING TIME:

The inorganic soil samples were reviewed for holding time violations using criteria developed for water samples. No defects were found.

### 2. CALIBRATIONS:

No defects were found for the calibration or the CRQL (CRI) standards.

### 3. BLANKS:

The following inorganic samples are associated with an ICB/CCB, preparation blank, or field blank concentration which is greater than the method detection limit (MDL). The sample result is greater than the MDL.

Hits less than the CRQL are qualified "U". The sample result is raised to the CRQL.  
Hits greater than the CRQL but less than 5 times the blank are qualified "U" and reported at the sample value.

Mercury

ME0072, ME0074, ME0076, ME0077, ME0078, ME0079

Zinc

ME0069

The following inorganic samples are associated with a negative ICB/CCB, preparation blank, or field blank concentration whose absolute value is greater than the method detection limit (MDL). The sample result is also greater than the MDL.

Hits less than 5 times the blank are qualified "J-".

Cyanide

ME0078

Thallium

ME0079

### 4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

The following inorganic samples are associated with a matrix spike recovery which is low (30-74%) indicating that sample results may be biased low. The required post spike was performed and results were greater than or equal to 75%.

Hits are qualified "J" and non-detects are qualified "UJ".

Selenium

ME0066, ME0069, ME0071, ME0080, ME0081, ME0085, ME0086

The following inorganic samples are associated with a matrix spike recovery which is low (30-74%) indicating that sample results may be biased low. No post spike was required.

Hits are qualified "J-" and non-detects are qualified "UJ".

Silver

ME0066, ME0069, ME0071, ME0080, ME0081, ME0085, ME0086

No defects were found for the laboratory control sample.

**5. LABORATORY AND FIELD DUPLICATE:**

No defects were found for the laboratory duplicate samples. No samples were designated as field duplicates.

**6. ICP ANALYSIS:**

The following inorganic sample results are affected by an interference check "A" sample (ICSA) for which false positive concentration values greater than the MDL were obtained. The samples contain Al, Ca, Fe, or Mg at a level comparable to the ICSA.

Hits less than 10 times the value of the ICSA are qualified "J+"; non-detects are not qualified. Hits greater than 10 times the ICSA are not qualified.

Beryllium

ME0072, ME0073, ME0074, ME0075, ME0077, ME0078, ME0079

Zinc

ME0069

The following results are affected by an interference check "A" sample (ICSA) for which false negative concentration values greater than the absolute value of the MDL were obtained. The sample contains Al, Ca, Fe or Mg at a level comparable to that of the ICSA.

Hits less than 10 times the absolute value of the ICSA are qualified "J-", non-detects are qualified "UJ". Hits greater than 10 times the ICSA are not qualified.

Antimony

ME0066, ME0069, ME0073, ME0075, ME0079, ME0082, ME0083

Arsenic

ME0066, ME0069, ME0073, ME0079

Cadmium

ME0066, ME0069, ME0072, ME0073, ME0075, ME0079

Selenium

ME0066, ME0069, ME0072, ME0073, ME0075, ME0076, ME0077, ME0078,  
ME0082, ME0083

Silver

ME0077, ME0078, ME0082,

Vanadium  
ME0066, ME0069

The following inorganic samples are associated with negative sample results whose absolute values are greater than the CRQL, indicating interference.

Non-detects are qualified "R".

Silver  
ME0066, ME0069

The following inorganic samples are associated with an ICP serial dilution percent difference which is not in control.

Hits are qualified "J" and non-detects are qualified "UJ".

Barium  
ME0066, ME0069, ME0071, ME0080, ME0081, ME0085, ME0086

Calcium  
ME0072, ME0073, ME0074, ME0075, ME0076, ME0077, ME0078, ME0079  
ME0082, ME0083

Iron  
ME0066, ME0069, ME0071, ME0080, ME0081, ME0085, ME0086

Magnesium  
ME0066, ME0069, ME0071, ME0080, ME0081, ME0085, ME0086

Manganese  
ME0066, ME0069, ME0071, ME0080, ME0081, ME0085, ME0086

Potassium  
ME0066, ME0069, ME0071, ME0072, ME0073, ME0074, ME0075, ME0076,  
ME0077, ME0078, ME0079, ME0080, ME0081, ME0082, ME0083, ME0085,  
ME0086

Zinc  
ME0066, ME0069, ME0071, ME0080, ME0081, ME0085, ME0086

## 7. SAMPLE RESULTS:

The following inorganic samples have analyte concentrations reported above the method detection limit (MDL) but below the quantitation limit (CRQL).

Results are qualified "J".

Aluminum  
ME0066, ME0085, ME0086

Antimony

ME0072, ME0079, ME0082, ME0083, ME0085

Arsenic

ME0066

Barium

ME0080, ME0081, ME0085, ME0086

Beryllium

ME0073, ME0074, ME0081, ME0085

Cadmium

ME0066, ME0069, ME0075

Calcium

ME0071

Chromium

ME0066, ME0080, ME0081, ME0085

Cobalt

ME0077, ME0079, ME0080, ME0081, ME0085

Copper

ME0066, ME0080, ME0081

Lead

ME0069, ME0086

Mercury

ME0066, ME0081

Nickel

ME0066, ME0080, ME0081, ME0085, ME0086

Potassium

ME0071, ME0075

Selenium

ME0077, ME0079

Sodium

ME0071, ME0072, ME0073, ME0074, ME0075, ME0076, ME0077, ME0078,  
ME0079

Thallium

ME0079

Zinc

ME0071

Cyanide

ME0072, ME0075, ME0076, ME0077, ME0078, ME0082, ME0083

All data, except those qualified above, are acceptable.

**CADRE ILM05.4 Data Qualifier Sheet**

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.



## Analytical Results (Qualified Data)

Page 1 of 4

Case #: 37407

SDG : ME0066

Site :

LAKE CALUMET SMELTING

Lab. :

CHEM

Reviewer :

L. Buco

Date :

5/27/2008

Number of Soil Samples : 10

Number of Water Samples : 7

Sample Number :	ME0072		ME0073		ME0074		ME0075		ME0076	
Sampling Location :	X118		X119		X120		X121		X202	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	4/23/2008		4/23/2008		4/23/2008		4/23/2008		4/23/2008	
Time Sampled :										
%Solids :	84.1		78.1		77.8		81.5		53	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	8050		12000		8880		3910		7430	
ANTIMONY	3.0	J	7.7	UJ	188		7.4	UJ	38.2	
ARSENIC	18.2		1.9	J-	27.0		26.1		36.3	
BARIUM	1480		89.7		4170		234		622	
BERYLLIUM	1.0	J+	0.55	J+	0.55	J+	0.85	J+	1.7	
CADMIUM	1.9	J-	0.64	UJ	171		0.27	J-	18.6	
CALCIUM	23500	J	51400	J	19800	J	40900	J	21200	J
CHROMIUM	33.7		22.4		762		63.7		61.7	
COBALT	6.9		10.1		102		8.4		10.5	
COPPER	66.1		15.0		1550		106		323	
IRON	21200		18900		234000		85200		39500	
LEAD	521		8.8		23400		1950		2840	
MAGNESIUM	9450		19500		4650		24600		5520	
MANGANESE	288		504		1170		530		648	
MERCURY	0.13	U	0.12	U	0.26	U	0.44		0.55	U
NICKEL	21.8		28.1		109		26.5		53.5	
POTASSIUM	1300	J	2690	J	1330	J	433	J	1070	J
SELENIUM	4.2	UJ	4.5	UJ	29.3		7.4	J-	6.6	UJ
SILVER	1.2	R	1.3	R	1.3	R	1.2	R	1.9	R
SODIUM	550	J	159	J	603	J	272	J	780	J
THALLIUM	3.0	U	3.2	U	3.2	U	3.1	U	4.7	U
VANADIUM	19.7		21.4		21.8		21.8		29.6	
ZINC	516		42.6		7920		2870		6320	
CYANIDE	0.61	J	3.2	U	4.7		1.1	J	1.3	J

## Analytical Results (Qualified Data)

Page 2 of 4

Case #: 37407

SDG : ME0066

Site :

LAKE CALUMET SMELTING

Lab. :

CHEM

Reviewer :

L. Buco

Date :

5/27/2008

Sample Number :	ME0077		ME0078		ME0079		ME0082		ME0083	
Sampling Location :	X203		X204		X205		X122		X123	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	4/23/2008		4/23/2008		4/23/2008		4/23/2008		4/23/2008	
Time Sampled :										
%Solids :	53.8		80.6		64.7		71.9		74.1	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	5780		4720		10000		11700		10500	
ANTIMONY	28.3		477		3.2	J-	6.4	J-	5.2	J-
ARSENIC	33.2		65.4		4.8	J-	160		106	
BARIUM	521		334		188		649		537	
BERYLLIUM	1.2	J+	0.81	J+	0.83	J+	2.0		1.8	
CADMIUM	21.2		27.0		1.7	J-	7.7		5.0	
CALCIUM	14500	J	36500	J	129000	J	21100	J	29900	J
CHROMIUM	50.4		57.0		256		66.8		96.1	
COBALT	8.9	J	6.6		5.9	J	9.5		9.1	
COPPER	268		1170		51.9		247		235	
IRON	33000		24500		70000		54500		57200	
LEAD	2200		8960		469		1020		895	
MAGNESIUM	4090		16900		27100		3900		5300	
MANGANESE	581		561		12000		871		1210	
MERCURY	0.54	U	0.12	U	0.15	U	0.29		0.38	
NICKEL	41.6		67.8		18.0		37.3		40.1	
POTASSIUM	1000	J	635	J	1380	J	1390	J	1360	J
SELENIUM	2.0	J-	4.3	UJ	3.2	J-	4.9	UJ	4.7	UJ
SILVER	1.9	UJ	2.6	J-	1.5	R	1.4	UJ	1.3	R
SODIUM	648	J	473	J	578	J	1360		1350	
THALLIUM	4.6	U	3.0	U	2.2	J-	3.5	U	3.4	U
VANADIUM	24.3		14.6		236		50.1		44.8	
ZINC	5360		1610		336		891		714	
CYANIDE	1.2	J	0.20	J-	3.9	U	1.2	J	0.94	J

## Analytical Results (Qualified Data)

Page 3 of 4

Case #: 37407

SDG : ME0066

Site :

LAKE CALUMET SMELTING

Lab. :

CHEM

Reviewer :

L. Buco

Date :

5/27/2008

Sample Number :	ME0066		ME0069		ME0071		ME0080		ME0081	
Sampling Location :	G101		G101F		FB101		G102		G103	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	4/22/2008		4/22/2008		4/23/2008		4/23/2008		4/23/2008	
Time Sampled :										
%Solids :	0.0		0.0		0.0		0.0		0.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	142	J	200	U	200	U	364		368	
ANTIMONY	60.0	UJ	60.0	UJ	60.0	U	60.0	U	60.0	U
ARSENIC	7.3	J-	10.0	UJ	10.0	U	17.0		11.5	
BARIUM	29300	J	28600	J	200	UJ	52.0	J	53.4	J
BERYLLIUM	5.0	U	5.0	U	5.0	U	5.0	U	0.4	J
CADMIUM	1.8	J-	1.7	J-	5.0	U	16.5		23.3	
CALCIUM	2150000		2080000		386	J	179000		199000	
CHROMIUM	2.5	J	10.0	U	10.0	U	4.3	J	7.1	J
COBALT	50.0	U	50.0	U	50.0	U	7.9	J	10.0	J
COPPER	10.1	J	25.0	U	25.0	U	10.6	J	13.3	J
IRON	277000	J	264000	J	191	J	13500	J	14800	J
LEAD	23.5		7.7	J	10.0	U	30.2		33.5	
MAGNESIUM	184000	J	178000	J	5000	UJ	33200	J	36400	J
MANGANESE	1560	J	1510	J	15.0	UJ	279	J	300	J
MERCURY	0.075	J	0.20	U	0.20	U	0.20	U	0.065	J
NICKEL	4.8	J	40.0	U	40.0	U	32.4	J	32.7	J
POTASSIUM	287000	J	282000	J	114	J	33600	J	34000	J
SELENIUM	35.0	UJ	35.0	UJ	35.0	UJ	35.0	UJ	35.0	UJ
SILVER	10.0	R	10.0	R	10.0	UJ	10.0	UJ	10.0	UJ
SODIUM	921000		890000		517	J	69100		72800	
THALLIUM	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
VANADIUM	50.0	UJ	50.0	UJ	50.0	U	50.0	U	50.0	U
ZINC	489	J	147	U	51.8	J	18500	J	21900	J
CYANIDE	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

## Analytical Results (Qualified Data)

Page 4 of 4

Case #: 37407

SDG : ME0066

Site :

LAKE CALUMET SMELTING

Lab. :

CHEM

Reviewer :

L. Buco

Date :

5/27/2008

Sample Number :	ME0085		ME0086							
Sampling Location :	G102 F		G103 F							
Matrix :	Water		Water							
Units :	ug/L		ug/L							
Date Sampled :	4/22/2008		4/22/2008							
Time Sampled :										
%Solids :	0.0		0.0							
Dilution Factor :	1.0		1.0							
ANALYTE	Result	Flag	Result	Flag				Flag	Result	Flag
ALUMINUM	65.4	J	79.3	J						
ANTIMONY	10.5	J	60.0	U						
ARSENIC	16.0		23.8							
BARIUM	25.6	J	22.7	J						
BERYLLIUM	0.37	J	5.0	U						
CADMIUM	5.0	U	5.0	U						
CALCIUM	202000		226000							
CHROMIUM	4.3	J	10.0	U						
COBALT	9.9	J	50.0	U						
COPPER	25.0	U	25.0	U						
IRON	13800	J	15300	J						
LEAD	10.0	U	5.7	J						
MAGNESIUM	36700	J	40900	J						
MANGANESE	295		321	J						
MERCURY	0.20	U	0.20	U						
NICKEL	33.5	J	38.5	J						
POTASSIUM	34800	J	36800	J						
SELENIUM	35.0	UJ	35.0	UJ						
SILVER	10.0	UJ	10.0	UJ						
SODIUM	74200		76300							
THALLIUM	25.0	U	25.0	U						
VANADIUM	50.0	U	50.0	U						
ZINC	20600	J	23900	J						
CYANIDE	10.0	U	10.0	U						



USEPA Contract Laboratory Program  
Inorganic Traffic Report & Chain of Custody Record

Case No: 37407

DAS No:

SDG No:

ME0066

L

Date Shipped: 4/22/2008	Carrier Name: UPS	Airbill: 16215892210082875	Shipped to: Chem Tech Consulting Group 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900
Chain of Custody Record			
Relinquished By	(Date / Time)	Sampler Signature Received By	(Date / Time)
1. John Z. Ray	4/22 1300	[Signature]	4/23/08 9:45
2. [Signature]		[Signature]	
3. [Signature]		[Signature]	
4. [Signature]		[Signature]	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0057	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55231 (Ice Only) (1)	X111	S: 4/22/2008	11:15 E0057	
ME0058	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55233 (Ice Only) (1)	X112	S: 4/22/2008	11:15 E0058	
ME0059	Waste/ Jerry Willman	H/G	ICP, Hg, CN (21)	5-55226 (Ice Only) (1)	X501	S: 4/22/2008	11:30	
ME0060	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55238 (Ice Only) (1)	X113	S: 4/22/2008	13:00 E0060	
ME0061	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55273 (Ice Only) (1)	X114	S: 4/22/2008	14:10 E0061	
ME0062	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55277 (Ice Only) (1)	X115	S: 4/22/2008	14:10 E0062	
ME0064	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55281 (Ice Only) (1)	X201	S: 4/22/2008	15:30 E0064	
ME0065	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-55285 (Ice Only) (1)	X116	S: 4/22/2008	16:25 E0065	
ME0066	Ground Water/ Jerry Willman	L/G	CN (21), ICP/MS, Hg (21)	5-55290 (HNO <sub>3</sub> ), 5-55291 (HNO <sub>3</sub> ), 5-55292 (HNO <sub>3</sub> ), 5-55293 (NaOH), 5-55294 (NaOH), 5-55295 (NaOH) (6)	G101	S: 4/22/2008	15:40 E0066	
ME0067	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-277442 (Ice Only) (1)	X117	S: 4/22/2008	17:10 E0067	

ME0047  
Signature: [Signature]  
Date: 4/23/08  
Original Documents are included in CSF  
Copy

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: ME0057, ME0066, ME0068, ME0069	Additional Sampler Signature(s): [Signature]	Cooler Temperature Upon Receipt: 4°C	Chain of Custody Seal Number: 89309
Analysis Key: CN = Cyanide, ICP, Hg, CN = CLP ICP Metals, Hg, CN, ICP/MS, Hg = CLP ICP Metals, Hg	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? [X] Yes	Shipment Iced? [X] Yes

TR Number: 5-162075208-042208-0003

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

LABORATORY COPY

F2V51.047 Page 2 of 3



USEPA Contract Laboratory Program  
Inorganic Traffic Report & Chain of Custody Record

Case No: 37407

DAS No:

SDG No:

ME0066 L

Date Shipped: 4/22/2008		Carrier Name: UPS		Airbill: 1z6215892210082875		Shipped to: ChemTech Consulting Group 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900	
Chain of Custody Record				Sampler Signature: <i>[Signature]</i>			
Relinquished By		(Date / Time)		Received By		(Date / Time)	
1. <i>[Signature]</i>		4/22 1900		2. <i>[Signature]</i>		4/23/08	
3. <i>[Signature]</i>				4. <i>[Signature]</i>		4/23/08 9:45	
4. <i>[Signature]</i>				5. <i>[Signature]</i>		4/23/08 9:45	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY SAMPLE No.	Sample Condition On Receipt
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ME0068	Soil/Sediment/ Jerry Willman	L/G	ICP/MS, Hg (21)	5-264057 (Ice Only) (1)	T106	S: 4/22/2008 14:10		
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ME0069	Ground Water/ Jerry Willman	L/G	CN (21), ICP/MS, Hg (21)	5-264058 (HNO3), 5-264059 (HNO3), 5-264060 (HNO3), 5-264061 (NaOH), 5-264062 (NaOH), 5-264063 (NaOH) (6)	G101F	S: 4/22/2008 15:40		
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12

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: ME0057, ME0066, ME0068, ME0069	Additional Sampler Signature(s): <i>[Signature]</i>	Cooler Temperature Upon Receipt: 4°C	Chain of Custody Seal Number: 89309
Analysis Key: CN = Cyanide, ICP, Hg, CN = CLP ICP Metals, Hg, CN, ICP/MS, Hg = CLP ICP Metals, Hg	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>

TR Number: 5-162075208-042208-0003

PR provides preliminary results. Requests for preliminary results will increase analytical costs.  
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

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USEPA Contract Laboratory Program  
Inorganic Traffic Report & Chain of Custody Record

Case No: 37407

DAS No:

SDG No:

ME0066 L

Date Shipped: 4/23/2008	Carrier Name: UPS	Airbill: 126215892210027149	Shipped to: ChemTech Consulting Group 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900
Chain of Custody Record		Relinquished By: [Signature]	Sampler Signature: [Signature]
1		4/23/2008 4:00 PM	4/23/2008 10:10
2			
3			
4			

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition on Receipt
ME0071	Field QC/ Jerry Willman	L/G	CN (21), ICP/MS, Hg (21)	5-264066 (HNO <sub>3</sub> ), 5-264067 (NaOH) (2)	FB101	S: 4/23/2008	E0071	
ME0072	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-264072 (Ice Only) (1)	X118	S: 4/23/2008	E0072	
ME0073	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-264076 (Ice Only) (1)	X119	S: 4/23/2008	E0073	
ME0074	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-264080 (Ice Only) (1)	X120	S: 4/23/2008	E0074	
ME0075	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-264084 (Ice Only) (1)	X121	S: 4/23/2008	E0075	
ME0076	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-264089 (Ice Only) (1)	X202	S: 4/23/2008	E0076	
ME0077	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-264093 (Ice Only) (1)	X203	S: 4/23/2008	E0077	
ME0078	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-264097 (Ice Only) (1)	X204	S: 4/23/2008	E0078	
ME0079	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-303480 (Ice Only) (1)	X205	S: 4/23/2008	E0079	
ME0082	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg, CN (21)	5-303496 (Ice Only) (1)	X122	S: 4/23/2008	E0082	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): [Signature]	Cooler Temperature Upon Receipt: 4°C	Chain of Custody Seal Number: 09315
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? [X]	Shipment Iced? [X]
CN = Cyanide, ICP, Hg, CN = CLP ICP Metals, Hg, CN, ICP/MS, Hg = CLP ICP Metals, Hg				

TR Number: 5-162075208-042308-0003

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602



USEPA Contract Laboratory Program  
Inorganic Traffic Report & Chain of Custody Record

Case No: 37407

DAS No:

SDG No:

ME0066 L

Date Shipped: 4/23/2008  
Carrier Name: UPS  
Airbill: 126215892210027149  
Shipped to: ChemTech Consulting  
Group  
284 Sheffield Street  
Mountainside NJ 07092  
(908) 789-8900

Chain of Custody Record

Relinquished By	(Date / Time)	Sampler Signature	Received By	(Date / Time)
1. <i>[Signature]</i>	4/23/08 1900		<i>[Signature]</i>	
2. <i>[Signature]</i>	4/23/08		<i>[Signature]</i>	
3. <i>[Signature]</i>			<i>[Signature]</i>	
4. <i>[Signature]</i>			<i>[Signature]</i>	10:10

For Lab Use Only

Lab Contract No:

Unit Price:

Transfer To:

Lab Contract No:

Unit Price:

INORGANIC  
SAMPLE No.

MATRIX/  
SAMPLER

CONC/  
TYPE

ANALYSIS/  
TURNAROUND

TAG No./  
PRESERVATIVE/ Bottles

STATION  
LOCATION

SAMPLE COLLECT  
DATE/TIME

ORGANIC  
SAMPLE No.

FOR LAB USE ONLY  
Sample Condition On Receipt

ME0083

Soil/Sediment/  
L/G ICP, Hg, CN (21) 5-303500 (Ice Only) (1)

X123

S: 4/23/2008

18:00

E0083

Jerry Willman

Shipment for Case  
Complete?N

Sample(s) to be used for laboratory QC:

Additional Sampler Signature(s):

Cooler Temperature  
Upon Receipt: 4°C

Chain of Custody Seal Number:

Analysis Key:

Concentration: L = Low, M = Low/Medium, H = High

Type/Designate: Composite = C, Grab = G

Custody Seal Intact? *[X]*

Shipment Iced? *[X]*

CN = Cyanide, ICP, Hg, CN = CLP ICP Metals, Hg, CN, ICP/MS, Hg = CLP ICP Metals, Hg

TR Number: 5-162075208-042308-0003

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

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USEPA Contract Laboratory Program  
Inorganic Traffic Report & Chain of Custody Record

Case No: 37407

DAS No:

SDG No:

ME0066 L

Date Shipped: 4/24/2008  
Carrier Name: UPS  
Airbill: 128215892210027167  
Shipped to: ChemTech Consulting  
Group  
284 Sheffield Street  
Mountainside NJ 07092  
(908) 789-8900

Chain of Custody Record

Relinquished By (Date / Time)

1 *[Signature]* 4/24/08 1300

2 *[Signature]*

3 *[Signature]*

4 *[Signature]*

Sampler Signature: *[Signature]*

Received By (Date / Time)

1 *[Signature]*

2 *[Signature]*

3 *[Signature]*

4 *[Signature]*

For Lab Use Only

Lab Contract No:

Unit Price:

Transfer To:

Lab Contract No:

Unit Price:

INORGANIC SAMPLE No. MATRIX/ SAMPLER CONC/ TYPE ANALYSIS/ TURNAROUND TAG No./ PRESERVATIVE/ Bottles STATION LOCATION SAMPLE COLLECT DATE/TIME ORGANIC SAMPLE No. FOR LAB USE ONLY Sample Condition On Receipt

ME0080 Ground Water/ Jerry Willman L/G CN (21), ICP/MS, Hg 5-303484 (HNO3), 5-303485 (NaOH) (2) G102 S: 4/23/2008 16:30 E0080

ME0081 Ground Water/ Jerry Willman L/G CN (21), ICP/MS, Hg 5-303490 (HNO3), 5-303491 (NaOH) (2) G103 S: 4/23/2008 16:30 E0081

ME0085 Ground Water/ Jerry Willman L/G CN (21), ICP/MS, Hg 5-303506 (HNO3), 5-303507 (NaOH) (2) G102 F S: 4/22/2008 16:30

ME0086 Ground Water/ Jerry Willman L/G CN (21), ICP/MS, Hg 5-303508 (HNO3), 5-303509 (NaOH) (2) G103 F S: 4/22/2008 16:30

SPG -  
FINAL  
SAMPLE

Shipment for Case Complete?	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 42	Chain of Custody Seal Number: 89319
Analysis Key: CN = Cyanide, ICP/MS, Hg = CLP ICP Metals, Hg	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>

TR Number: 5-162075208-042408-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

F2V51.047 Page 1 of 1

LABORATORY COPY

**CHEMTECH**  
**284 Sheffield Street**  
**Mountainside, NJ 07092**

## **SDG NARRATIVE**

**USEPA**  
**SDG # ME0066**  
**CASE # 37407**  
**CONTRACT # EPW06047**  
**LAB NAME: CHEMTECH CONSULTING GROUP**  
**LAB CODE: CHEM**  
**CHEMTECH PROJECT #Z2499**

### **A. Number of Samples and Date of Receipt**

7 Water & 10 Soil Samples were delivered to the laboratory intact on 04/23/08, 04/24/08 & 04/25/08.

### **B. Parameters**

Test requested for Total Metals (by ICP-AES), Hg & Cn.

### **C. Cooler Temp**

Indicator Bottle: Presence/Absence  
Cooler: 4°C

### **D. Detail Documentation (related to Sample Handling Shipping, Analytical Problem, Temp of Cooler etc):**

Issue 1: Issue: Samples identified on the TR/COC having the station location in place of the sample ID are listed for TCLP analysis on the TR/COC, however per scheduling, ICP-AES Metals, Hg and CN is requested. In addition, sample ME0068 has "T106" as the station location on the TR/COC. The station location is the same format as other samples on the TR/COC that were designated for TCLP metals. The lab would like to confirm whether sample ME0068, listed for ICP/MS and Hg on the TR/COC is also for TCLP metals

Issue 2: Samples ME0069 and ME0066 are listed as laboratory QC for aqueous samples on TR/COC received on 4/23. Sample ME0069 is not needed and the laboratory would like to disregard and use Sample ME0066 as laboratory QC.

Issue 3: Per TR/COC, sample ME0068 was designated for laboratory QC, however since this sample is for TCLP metals and is being transshipped, the lab would like to select sample ME0072 for laboratory QC for SDG ME0066.

Issue 4: Samples ME0066 and ME0069 are listed for ICP-MS, Hg, and CN on the TR/COC, however per scheduling, ICP-AES is requested.

## **CHEMTECH**

**284 Sheffield Street**

**Mountainside, NJ 07092**

### **E. Corrective Action taken for above:**

Resolution 1: Per previous direction from Region 5, please trans-ship the 9 soil samples, this includes sample ME0068 identified for TCLP analysis using either UPS account # 621589 (billing zip code 62794) or Fed X account #190984745 to:

Attn: Craig Chawla

Hi Tech Environmental Inc.

2242 West Harrison St.

Suite 200

Chicago, IL 60612

(312) 353-2310

Resolution 2: In accordance with previous direction from Region 5, the laboratory will select one of the designated samples for laboratory QC. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Resolution 3: In accordance with previous direction from Region 5, the laboratory will select a sample for laboratory QC as long as the sample is not a PE, blank, or rinsate sample. The laboratory will note the issue in the SDG Narrative, notify the SMO coordinator of the samples selected for laboratory QC, and proceed with the analysis of the samples. If the laboratory is not sure that the sample they selected is not a PE, blank, or rinsate sample, they will contact SMO and wait for a resolution. SMO will note the selection of sample ME0072 chosen for laboratory QC

Resolution 4: In accordance with previous direction from Region 5, the laboratory will note the issue in the SDG Narrative, perform the analysis as indicated on the Scheduling Notification Form, and proceed with the analysis of the samples

### **F. Analytical Techniques:**

All analyses were based on CLP Methodology by method ILM05.4

### **G. Calculation:**

Water Sample Calculation:

For ICP-AES:

Result in Ug/L on Forms = Results in ppm (ICP-AES Raw Data) X 1000 X Dilution Factor (if any)

For Hg:

Result in Ug/L on Forms = Results in ppb (Hg Raw Data) X Dilution Factor (if any)

For CN:

Result in Ug/L on Forms = Results in Ug/L (CN Raw Data) X Dilution Factor (if any)

**CHEMTECH**  
**284 Sheffield Street**  
**Mountainside, NJ 07092**

Soil Sample Calculation:

Conversion of results from mg/L to mg/kg (Dry Weight Basis):

$Mg/Kg = (Result\ in\ mg/L) \times 1000 \times 100\ \% \text{ Solid} \times \text{Fraction of Sample Amount Taken in Prep.}$

**H. QA/QC**

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements except for Selenium & Silver. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for Barium, Iron, Magnesium, Manganese & Zinc.

I certify that the data package is in compliance with the terms and conditions of the contract both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Signature \_\_\_\_\_

Name: Parveen Hasan

Date \_\_\_\_\_

Title: Project Manager

MAY 14 2008

USEPA - CLP

COVER PAGE

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066SOW No.: ILM05.4

EPA Sample No.	Lab Sample ID
ME0066	Z2499-01
ME0066D	Z2499-02
ME0066S	Z2499-03
ME0069	Z2499-07
ME0071	Z2499-08
ME0072	Z2499-09
ME0072D	Z2499-05
ME0072S	Z2499-06
ME0073	Z2499-10
ME0074	Z2499-11
ME0075	Z2499-12
ME0076	Z2499-13
ME0077	Z2499-14
ME0078	Z2499-15
ME0079	Z2499-16
ME0080	Z2499-19
ME0081	Z2499-20
ME0082	Z2499-17
ME0083	Z2499-18
ME0085	Z2499-21
ME0086	Z2499-22

	ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No) <u>YES</u>	_____
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No) <u>YES</u>	_____
If yes, were raw data generated before application of background corrections?	(Yes/No) <u>NO</u>	_____

Comments:

THE "E" QUALIFIERS ON FORM I AND VIII FOR BARIUM, IRON, MAGNESIUM, MANGANESE, ZINC, CALCIUM AND POTASSIUM INDICATE CHEMICAL OR PHYSICAL INTERFERENCE EFFECTS, WHICH WERE SUSPECTED DURING THOSE

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:   
Date: 5/12/08

Name: PARVEEN HASANTitle: EPA PROJECT MANAGER

COVER PAGE

ILM05.4

## USEPA - CLP

3-IN  
BLANKSLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum	200.000	U	200.000	U	200.000	U	200.000	U	200.000	U	P
Antimony	60.000	U	60.000	U	60.000	U	60.000	U	60.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Barium	200.000	U	200.000	U	200.000	U	200.000	U	200.000	U	P
Beryllium	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	P
Cadmium	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	P
Calcium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5000.000	U	P
Chromium	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Cobalt	50.000	U	50.000	U	50.000	U	50.000	U	50.000	U	P
Copper	25.000	U	25.000	U	25.000	U	25.000	U	25.000	U	P
Iron	100.000	U	100.000	U	100.000	U	100.000	U	100.000	U	P
Lead	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Magnesium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5000.000	U	P
Manganese	15.000	U	15.000	U	15.000	U	15.000	U	15.000	U	P
Mercury	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	CV
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	40.000	U	P
Potassium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5000.000	U	P
Selenium	35.000	U	35.000	U	35.000	U	35.000	U	35.000	U	P
Silver	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Sodium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5000.000	U	P
Thallium	25.000	U	25.000	U	25.000	U	25.000	U	25.000	U	P
Vanadium	50.000	U	50.000	U	50.000	U	50.000	U	50.000	U	P
Zinc	60.000	U	60.000	U	60.000	U	60.000	U	60.000	U	P
Cyanide	10.000	U	10.000	U	10.000	U	10.000	U	-1.555	J	AS

## USEPA - CLP

3-IN  
BLANKSLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum			200.000	U	200.000	U	200.000	U	20.000	U	P
Antimony			60.000	U	60.000	U	60.000	U	6.000	U	P
Arsenic			10.000	U	10.000	U	10.000	U	1.000	U	P
Barium			200.000	U	200.000	U	200.000	U	20.000	U	P
Beryllium			5.000	U	5.000	U	5.000	U	0.500	U	P
Cadmium			5.000	U	5.000	U	5.000	U	0.500	U	P
Calcium			5000.000	U	5000.000	U	-215.860	J	500.000	U	P
Chromium			10.000	U	10.000	U	10.000	U	1.000	U	P
Cobalt			50.000	U	50.000	U	50.000	U	5.000	U	P
Copper			25.000	U	25.000	U	25.000	U	2.500	U	P
Iron			-39.965	J	100.000	U	-38.060	J	10.000	U	P
Lead			10.000	U	10.000	U	10.000	U	1.000	U	P
Magnesium			5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Manganese			15.000	U	15.000	U	15.000	U	1.500	U	P
Mercury			-0.043	J					0.100	U	CV
Nickel			40.000	U	40.000	U	40.000	U	4.000	U	P
Potassium			5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Selenium			35.000	U	35.000	U	35.000	U	3.500	U	P
Silver			10.000	U	10.000	U	10.000	U	1.000	U	P
Sodium			5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Thallium			25.000	U	25.000	U	25.000	U	-0.885	J	P
Vanadium			50.000	U	50.000	U	50.000	U	5.000	U	P
Zinc			60.000	U	60.000	U	60.000	U	6.000	U	P
Cyanide			10.000	U					-0.091	J	AS

## USEPA - CLP

3-IN  
BLANKSLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066

Preparation Blank Matrix (soil/water): \_\_\_\_\_

Preparation Blank Concentration Units (ug/L or mg/kg): \_\_\_\_\_

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury	0.200	U	0.200	U	0.200	U	0.200	U			CV
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR



## USEPA - CLP

3-IN  
BLANKSLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066

Preparation Blank Matrix (soil/water): \_\_\_\_\_

Preparation Blank Concentration Units (ug/L or mg/kg): \_\_\_\_\_

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury			0.200	U	0.130	J	0.200	U			CV
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

## USEPA - CLP

3-IN  
BLANKSLab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066

Preparation Blank Matrix (soil/water): \_\_\_\_\_

Preparation Blank Concentration Units (ug/L or mg/kg): \_\_\_\_\_

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury			0.200	U							CV
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

## USEPA - CLP

5A-IN  
MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME0066S

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Matrix: (soil/water) WATER Level: (low/med) LOW% Solids for Sample: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2147.9250	141.6500 J	2000.00	100		P
Antimony	75-125	79.5650	60.0000 U	100.00	80		P
Arsenic	75-125	46.0100	7.2600 J	40.00	97		P
Barium		30979.3250	29323.9450	2000.00	83		P
Beryllium	75-125	42.0500	5.0000 U	50.00	84		P
Cadmium	75-125	45.3600	1.7950 J	50.00	87		P
Calcium							NR
Chromium	75-125	180.5850	2.5200 J	200.00	89		P
Cobalt	75-125	437.5700	50.0000 U	500.00	88		P
Copper	75-125	263.3100	10.0500 J	250.00	101		P
Iron		278978.0550	276754.2750	1000.00	222		P
Lead	75-125	43.7050	23.5100	20.00	101		P
Magnesium							NR
Manganese	75-125	2015.2750	1564.8500	500.00	90		P
Mercury	75-125	1.1200	0.0750 J	1.00	105		CV
Nickel	75-125	435.4850	4.8400 J	500.00	86		P
Potassium							NR
Selenium	75-125	35.3900	35.0000 U	50.00	71	N	P
Silver	75-125	23.2900	10.0000 U	50.00	47	N	P
Sodium							NR
Thallium	75-125	39.9450	25.0000 U	50.00	80		P
Vanadium	75-125	443.2700	50.0000 U	500.00	89		P
Zinc	75-125	906.3700	489.3200	500.00	83		P
Cyanide	75-125	98.9481	10.0000 U	100.00	99		AS

Comments:

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## USEPA - CLP

5A-IN  
MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME0072S

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Matrix: (soil/water) SOIL Level: (low/med) LOW% Solids for Sample: 84.2Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony	75-125	26.1467	3.0249 J	23.75	97		P
Arsenic	75-125	26.5030	18.1835	9.50	88		P
Barium	75-125	1930.8711	1480.5220	475.06	95		P
Beryllium	75-125	12.1496	1.0172	11.88	94		P
Cadmium	75-125	12.8961	1.9068	11.88	93		P
Calcium							NR
Chromium	75-125	79.6354	33.6128	47.51	97		P
Cobalt	75-125	117.4056	6.9323	118.76	93		P
Copper	75-125	125.9335	65.9727	59.38	101		P
Iron							NR
Lead		508.3872	520.7922	4.75	-261		P
Magnesium							NR
Manganese	75-125	393.1128	288.0766	118.76	88		P
Mercury	75-125	0.5861	0.1283	0.59	78		CV
Nickel	75-125	132.1948	21.7512	118.76	93		P
Potassium							NR
Selenium	75-125	11.1110	4.1568 U	11.88	94		P
Silver	75-125	9.9745	1.1876 U	11.88	84		P
Sodium							NR
Thallium	75-125	9.8551	2.9691 U	11.88	83		P
Vanadium	75-125	135.6390	19.7049	118.76	98		P
Zinc		599.1829	515.2862	118.76	71		P
Cyanide	75-125	5.6812	0.6106 J	5.94	85		AS

Comments:

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## USEPA - CLP

5B-IN  
POST-DIGESTION SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME0066A

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Matrix: (soil/water) WATERLevel: (low/med) LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C		Sample Result (SR) C		Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Nickel									NR
Potassium									NR
Selenium		117.41		35.00	U	70.0	168		P
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

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## USEPA - CLP

5B-IN  
POST-DIGESTION SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME0072A

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Matrix: (soil/water) SOIL Level: (low/med) LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony							NR
Arsenic							NR
Barium							NR
Beryllium							NR
Cadmium							NR
Calcium							NR
Chromium							NR
Cobalt							NR
Copper							NR
Iron							NR
Lead							NR
Magnesium							NR
Manganese							NR
Nickel							NR
Potassium							NR
Selenium							NR
Silver							NR
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc							NR
Cyanide							NR

Comments:

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## USEPA - CLP

6-IN  
DUPLICATES

EPA SAMPLE NO.

ME0066D

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Matrix: (soil/water) WATER Level: (low/med) LOW% Solids for Sample: 0.0 % Solids for Duplicate: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)		Duplicate (D)		RPD	Q	M
			C		C			
Aluminum		141.6500	J	155.0500	J	9		P
Antimony		60.0000	U	60.0000	U			P
Arsenic		7.2600	J	10.0000	U	200		P
Barium		29323.9450		29730.5950		1		P
Beryllium		5.0000	U	5.0000	U			P
Cadmium		1.7950	J	2.0350	J	13		P
Calcium		2147922.1500		2046485.8750		5		P
Chromium		2.5200	J	1.7250	J	37		P
Cobalt		50.0000	U	50.0000	U			P
Copper		10.0500	J	10.6300	J	6		P
Iron		276754.2750		281568.4250		2		P
Lead	10.0	23.5100		26.2550		11		P
Magnesium		183608.0350		186811.8450		2		P
Manganese		1564.8500		1591.2100		2		P
Mercury		0.0750	J	0.0470	J	46		CV
Nickel		4.8400	J	5.1050	J	5		P
Potassium		287234.3000		274672.3250		4		P
Selenium		35.0000	U	35.0000	U			P
Silver		10.0000	U	10.0000	U			P
Sodium		921200.1150		937237.6900		2		P
Thallium		25.0000	U	25.0000	U			P
Vanadium		50.0000	U	50.0000	U			P
Zinc		489.3200		495.1000		1		P
Cyanide		10.0000	U	10.0000	U			AS

## USEPA - CLP

6-IN  
DUPLICATES

EPA SAMPLE NO.

ME0072D

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Matrix: (soil/water) SOIL Level: (low/med) LOW% Solids for Sample: 84.2 % Solids for Duplicate: 82.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)		Duplicate (D)		RPD	Q	M
			C		C			
Aluminum		8043.0629		8028.9157		0		P
Antimony		3.0249	J	3.1686	J	5		P
Arsenic		18.1835		17.9614		1		P
Barium		1480.5220		1478.5742		0		P
Beryllium	0.6	1.0172		1.0095		1		P
Cadmium	0.6	1.9068		1.8842		1		P
Calcium		23481.9281		23413.2565		0		P
Chromium		33.6128		33.5327		0		P
Cobalt	5.9	6.9323		6.8242		2		P
Copper		65.9727		65.8135		0		P
Iron		21141.1550		21092.7850		0		P
Lead		520.7922		518.3527		0		P
Magnesium		9436.5938		9409.3058		0		P
Manganese		288.0766		287.2346		0		P
Mercury	0.1	0.1283		0.1027	J	22		CV
Nickel	4.8	21.7512		21.6740		0		P
Potassium	593.8	1296.7007		1293.8052		0		P
Selenium		4.1568	U	4.1568	U			P
Silver		1.1876	U	1.1876	U			P
Sodium		549.1591	J	545.7233	J	1		P
Thallium		2.9691	U	2.9691	U			P
Vanadium	5.9	19.7049		19.5920		1		P
Zinc		515.2862		512.4644		1		P
Cyanide		0.6106	J	0.6705	J	9		AS



## USEPA - CLP

4A-IN

## ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000	241000	99	240000	100	237000	97	238000	99
Antimony	0	589	-9.4		580	98	-7.9		609	103
Arsenic	0	101	-7.8		93.4	92	-9.7		99.3	98
Barium	2.0	495	1.1	55	539	109	-0.040	-2	526	106
Beryllium	0	475	0.73		467	98	0.89		506	107
Cadmium	0	940	-0.52		948	101	-2.7		1060	113
Calcium	235000	231000	230000	98	228000	99	248000	106	248000	107
Chromium	43.0	511	42.4	99	523	102	46.4	108	556	109
Cobalt	4.0	461	3.9	98	466	101	5.3	133	498	108
Copper	23.0	548	20.7	90	531	97	19.0	83	501	91
Iron	95600	94800	92300	97	91900	97	99300	104	99600	105
Lead	10.0	61.0	10.1	101	65.5	107	9.0	90	60.4	99
Magnesium	248000	251000	251000	101	249000	99	265000	107	265000	106
Manganese	19.0	502	22.4	118	513	102	15.4	81	526	105
Nickel	21.0	984	20.7	99	970	99	22.0	105	1050	107
Potassium	0	0	-14.8		-17.2		10.6		9.8	
Selenium	0	53.0	-2.6		51.5	97	-6.3		47.7	90
Silver	0	206	-8.5		200	97	-8.9		202	98
Sodium	0	0	503		577		1050		1180	
Thallium	0	103	-3.7		94.9	92	-7.1		106	103
Vanadium	0	494	-6.7		473	96	-8.1		510	103
Zinc	28.0	1030	41.4	148	973	94	46.3	165	1090	106

## USEPA - CLP

4A-IN

## ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000					235000	96	241000	100
Antimony	0	589					-13.3		586	99
Arsenic	0	101					-6.0		91.1	90
Barium	2.0	495					3.4	170	537	108
Beryllium	0	475					0.84		478	101
Cadmium	0	940					-2.2		970	103
Calcium	235000	231000					228000	97	234000	101
Chromium	43.0	511					42.1	98	536	105
Cobalt	4.0	461					3.4	85	472	102
Copper	23.0	548					20.1	87	525	96
Iron	95600	94800					91400	96	93700	99
Lead	10.0	61.0					8.9	89	60.0	98
Magnesium	248000	251000					245000	99	252000	100
Manganese	19.0	502					16.5	87	513	102
Nickel	21.0	984					19.9	95	986	100
Potassium	0	0					-1.4		1.7	
Selenium	0	53.0					-1.4		48.8	92
Silver	0	206					-9.3		200	97
Sodium	0	0					831		1010	
Thallium	0	103					-4.2		99.6	97
Vanadium	0	494					-8.5		479	97
Zinc	28.0	1030					42.3	151	1010	98

## USEPA - CLP

4A-IN

## ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066ICP-AES Instrument ID: P2 ICS Source: EPA0503-0203Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000	241000					239000	98	241000	100
Antimony	0	589					-2.2		586	99
Arsenic	0	101					-8.1		96.4	95
Barium	2.0	495					-1.3	-65	532	107
Beryllium	0	475					0.87		482	101
Cadmium	0	940					-2.1		981	104
Calcium	235000	231000					237000	101	237000	103
Chromium	43.0	511					46.0	107	541	106
Cobalt	4.0	461					5.4	135	478	104
Copper	23.0	548					20.7	90	526	96
Iron	95600	94800					94400	99	95000	100
Lead	10.0	61.0					8.6	86	66.7	109
Magnesium	248000	251000					253000	102	255000	102
Manganese	19.0	502					17.2	91	518	103
Nickel	21.0	984					21.2	101	995	101
Potassium	0	0					4.3		-21.3	
Selenium	0	53.0					-1.5		50.2	95
Silver	0	206					-8.4		202	98
Sodium	0	0					1280		566	
Thallium	0	103					-5.1		101	98
Vanadium	0	494					-8.2		484	98
Zinc	28.0	1030					43.9	157	1030	100

## USEPA - CLP

8-IN  
ICP-AES and ICP-MS SERIAL DILUTIONS

EPA SAMPLE NO.

ME0066L

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Matrix: (soil/water) WATERLevel: (low/med) LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I) C		Serial Dilution Result (S) C		% Difference	Q	M
Aluminum	141.65	J	1000.00	U	100		P
Antimony	60.00	U	300.00	U			P
Arsenic	7.26	J	50.00	U	100		P
Barium	29323.95		39822.05		36	E	P
Beryllium	5.00	U	25.00	U			P
Cadmium	1.80	J	25.00	U	100		P
Calcium	429584.43		439754.93		2		P
Chromium	2.52	J	50.00	U	100		P
Cobalt	50.00	U	250.00	U			P
Copper	10.05	J	10.48	J	4		P
Iron	276754.28		351215.60		27	E	P
Lead	23.51		27.13	J	15		P
Magnesium	183608.04		225663.33		23	E	P
Manganese	1564.85		1979.70		27	E	P
Nickel	4.84	J	200.00	U	100		P
Potassium	57446.86		43836.25		24	E	P
Selenium	35.00	U	175.00	U			P
Silver	10.00	U	50.00	U			P
Sodium	921200.12		970565.28		5		P
Thallium	25.00	U	125.00	U			P
Vanadium	50.00	U	250.00	U			P
Zinc	489.32		603.30		23	E	P

## USEPA - CLP

8-IN  
ICP-AES and ICP-MS SERIAL DILUTIONS

EPA SAMPLE NO.

ME0072L

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Matrix: (soil/water) SOIL Level: (low/med) LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I) C		Serial Dilution Result (S) C		% Difference	Q	M
Aluminum	67722.59		71514.98		6		P
Antimony	25.47	J	300.00	U	100		P
Arsenic	153.11		157.45		3		P
Barium	12466.00		13517.78		8		P
Beryllium	8.57		9.18	J	7		P
Cadmium	16.06		12.90	J	20		P
Calcium	197717.84		221461.28		12	E	P
Chromium	283.02		304.73		8		P
Cobalt	58.37		60.03	J	3		P
Copper	555.49		568.28		2		P
Iron	178008.53		193224.53		9		P
Lead	4385.07		4723.73		8		P
Magnesium	79456.12		85399.55		7		P
Manganese	2425.61		2620.80		8		P
Nickel	183.15		199.48	J	9		P
Potassium	10918.22		9126.55	J	16	E	P
Selenium	35.00	U	175.00	U			P
Silver	10.00	U	50.00	U			P
Sodium	4623.92	J	4954.10	J	7		P
Thallium	25.00	U	125.00	U			P
Vanadium	165.92		173.00	J	4		P
Zinc	4338.71		4757.05		10		P

## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Instrument Type: AS Instrument ID: CN Date: 01/15/2008Preparation Method: DS2Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		20	
Antimony		6	
Arsenic		1	
Barium		20	
Beryllium		0.5	
Cadmium		0.5	
Calcium		500	
Chromium		1	
Cobalt		5	
Copper		2.5	
Iron		10	
Lead		1	
Magnesium		500	
Manganese		1.5	
Mercury		0.1	
Nickel		4	
Potassium		500	
Selenium		3.5	
Silver		1	
Sodium		500	
Thallium		2.5	
Vanadium		5	
Zinc		6	
Cyanide	578.00	2.5	0.020

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Instrument Type: AS Instrument ID: CN Date: 01/15/2008Preparation Method: DW2Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		200	
Antimony		60	
Arsenic		10	
Barium		200	
Beryllium		5	
Cadmium		5	
Calcium		5000	
Chromium		10	
Cobalt		50	
Copper		25	
Iron		100	
Lead		10	
Magnesium		5000	
Manganese		15	
Mercury		0.2	
Nickel		40	
Potassium		5000	
Selenium		35	
Silver		10	
Sodium		5000	
Thallium		25	
Vanadium		50	
Zinc		60	
Cyanide	578.00	10	1.3

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Instrument Type: AS Instrument ID: CN Date: 01/15/2008Preparation Method: NP1Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		200	
Antimony		60	
Arsenic		10	
Barium		200	
Beryllium		5	
Cadmium		5	
Calcium		5000	
Chromium		10	
Cobalt		50	
Copper		25	
Iron		100	
Lead		10	
Magnesium		5000	
Manganese		15	
Mercury		0.2	
Nickel		40	
Potassium		5000	
Selenium		35	
Silver		10	
Sodium		5000	
Thallium		25	
Vanadium		50	
Zinc		60	
Cyanide	578.00	10	2.1

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Instrument Type: CV Instrument ID: CV1 Date: 01/15/2008Preparation Method: CS1Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		20	
Antimony		6	
Arsenic		1	
Barium		20	
Beryllium		0.5	
Cadmium		0.5	
Calcium		500	
Chromium		1	
Cobalt		5	
Copper		2.5	
Iron		10	
Lead		1	
Magnesium		500	
Manganese		1.5	
Mercury	253.70	0.1	0.024
Nickel		4	
Potassium		500	
Selenium		3.5	
Silver		1	
Sodium		500	
Thallium		2.5	
Vanadium		5	
Zinc		6	
Cyanide		2.5	

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Instrument Type: CV Instrument ID: CV1 Date: 01/15/2008Preparation Method: CW1Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum		200	
Antimony		60	
Arsenic		10	
Barium		200	
Beryllium		5	
Cadmium		5	
Calcium		5000	
Chromium		10	
Cobalt		50	
Copper		25	
Iron		100	
Lead		10	
Magnesium		5000	
Manganese		15	
Mercury	253.70	0.2	0.043
Nickel		40	
Potassium		5000	
Selenium		35	
Silver		10	
Sodium		5000	
Thallium		25	
Vanadium		50	
Zinc		60	
Cyanide		10	

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Instrument Type: P Instrument ID: P2 Date: 01/15/2008Preparation Method: HS1Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.20	20	2.4
Antimony	206.80	6	0.78
Arsenic	189.00	1	0.46
Barium	493.40	20	1.0
Beryllium	313.00	0.5	0.030
Cadmium	226.50	0.5	0.13
Calcium	317.90	500	29.4
Chromium	267.70	1	0.14
Cobalt	228.60	5	0.53
Copper	324.70	2.5	0.17
Iron	271.40	10	3.5
Lead	220.40	1	0.41
Magnesium	279.00	500	3.7
Manganese	257.60	1.5	0.11
Mercury		0.1	
Nickel	231.60	4	0.64
Potassium	766.50	500	2.1
Selenium	196.00	3.5	0.68
Silver	328.00	1	0.13
Sodium	330.20	500	69.4
Thallium	190.90	2.5	0.44
Vanadium	292.40	5	0.79
Zinc	206.20	6	1.0
Cyanide		2.5	

Comments:

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## USEPA - CLP

9-IN  
METHOD DETECTION LIMITS (ANNUALLY)Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Instrument Type: P Instrument ID: P2 Date: 01/15/2008Preparation Method: HW1Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.20	200	45.8
Antimony	206.80	60	6.8
Arsenic	189.00	10	3.9
Barium	493.40	200	10.8
Beryllium	313.00	5	0.30
Cadmium	226.50	5	1.1
Calcium	317.90	5000	275
Chromium	267.70	10	1.2
Cobalt	228.60	50	2.5
Copper	324.70	25	1.7
Iron	271.40	100	37.0
Lead	220.40	10	4.6
Magnesium	279.00	5000	60.5
Manganese	257.60	15	1.4
Mercury		0.2	
Nickel	231.60	40	4.7
Potassium	766.50	5000	43.7
Selenium	196.00	35	5.0
Silver	328.00	10	0.70
Sodium	330.20	5000	463
Thallium	190.90	25	8.0
Vanadium	292.40	50	3.1
Zinc	206.20	60	6.4
Cyanide		10	

Comments:

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## USEPA - CLP

9-IN

## METHOD DETECTION LIMITS (ANNUALLY)

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Instrument Type: P Instrument ID: P2 Date: 01/15/2008Preparation Method: NP1Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.20	200	29.9
Antimony	206.80	60	9.3
Arsenic	189.00	10	3.8
Barium	493.40	200	8.9
Beryllium	313.00	5	0.40
Cadmium	226.50	5	1.4
Calcium	317.90	5000	187
Chromium	267.70	10	1.8
Cobalt	228.60	50	3.4
Copper	324.70	25	0.90
Iron	271.40	100	15.3
Lead	220.40	10	3.8
Magnesium	279.00	5000	175
Manganese	257.60	15	1.2
Mercury		0.2	
Nickel	231.60	40	4.5
Potassium	766.50	5000	158
Selenium	196.00	35	5.8
Silver	328.00	10	1.8
Sodium	330.20	5000	655
Thallium	190.90	25	9.2
Vanadium	292.40	50	6.4
Zinc	206.20	60	6.0
Cyanide		10	

Comments:

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USEPA - CLP  
12-IN  
PREPARATION LOG

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW06047

Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066

Preparation Method: CS1

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
CCB	05/05/2008		100
CCV	05/05/2008		100
CRI	05/05/2008		100
ICB	05/05/2008		100
ICV	05/05/2008		100
LCSS	05/05/2008	0.20	100
ME0072	05/05/2008	0.20	100
ME0072D	05/05/2008	0.20	100
ME0072S	05/05/2008	0.20	100
ME0073	05/05/2008	0.22	100
ME0074	05/05/2008	0.21	100
ME0075	05/05/2008	0.21	100
ME0076	05/05/2008	0.20	100
ME0077	05/05/2008	0.20	100
ME0078	05/05/2008	0.22	100
ME0079	05/05/2008	0.20	100
ME0082	05/05/2008	0.20	100
ME0083	05/05/2008	0.21	100
PBS	05/05/2008	0.20	100
S0	05/05/2008		100
S0.2	05/05/2008		100
S2.5	05/05/2008		100
S5.0	05/05/2008		100
S7.5	05/05/2008		100
S10.0	05/05/2008		100



USEPA - CLP

12-IN  
PREPARATION LOG

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047

Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066Preparation Method: HS1[illegible]



## USEPA - CLP

13-IN  
ANALYSIS RUN LOGLab Name CHEMTECH CONSULTING GROUPContract: EPW06047Lab Code: CHEMCase No.: 37407

NRAS No.: \_\_\_\_\_

SDG No.: ME0066Instrument ID: CV1Analysis Method: CVStart Date: 05/01/2008End Date: 05/01/2008

EPA Sample No.	D/F	Time	Analytes																							
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N
S0	1.0	1402															X									
S0.2	1.0	1404															X									
S2.5	1.0	1406															X									
S5.0	1.0	1408															X									
S7.5	1.0	1410															X									
S10.0	1.0	1412															X									
ICV	1.0	1420															X									
ICB	1.0	1422															X									
CRI	1.0	1424															X									
CCV	1.0	1426															X									
CCB	1.0	1429															X									
PBW	1.0	1431															X									
ME0066	1.0	1433															X									
ME0066D	1.0	1435															X									
ME0066S	1.0	1437															X									
ME0069	1.0	1440															X									
ME0071	1.0	1442															X									
ME0080	1.0	1444															X									
ME0081	1.0	1446															X									
CCV	1.0	1448															X									
CCB	1.0	1451															X									
ME0085	1.0	1453															X									
ME0086	1.0	1455															X									
ZZZZZZ	1.0	1457																								
ZZZZZZ	1.0	1500																								
ZZZZZZ	1.0	1502																								
ZZZZZZ	1.0	1504																								
ZZZZZZ	1.0	1506																								
ZZZZZZ	1.0	1508																								
CRI	1.0	1510															X									
CCV	1.0	1513															X									
CCB	1.0	1515															X									
ZZZZZZ	1.0	1517																								

# 13-IN ANALYSIS RUN LOG

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047  
Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066  
Instrument ID: CV1 Analysis Method: CV  
Start Date: 05/01/2008 End Date: 05/01/2008

[illegible]

# 13-IN ANALYSIS RUN LOG

Lab Name: CHEMTECH CONSULTING GROUP Contract: EPW06047  
Lab Code: CHEM Case No.: 37407 NRAS No.: \_\_\_\_\_ SDG No.: ME0066  
Instrument ID: CV1 Analysis Method: CV  
Start Date: 05/05/2008 End Date: 05/05/2008

[illegible]



## USEPA - CLP

13-IN  
ANALYSIS RUN LOGLab Name CHEMTECH CONSULTING GROUPContract: EPW06047Lab Code: CHEMCase No.: 37407

NRAS No.: \_\_\_\_\_

SDG No.: ME0066Instrument ID: CNAnalysis Method: ASStart Date: 05/05/2008End Date: 05/05/2008

EPA Sample No.	D/F	Time	Analytes																					
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V
S0	1.0	1501																						X
S5.0	1.0	1501																						X
S10.0	1.0	1501																						X
S100.0	1.0	1501																						X
S250.0	1.0	1501																						X
S500.0	1.0	1501																						X
ICV	1.0	1515																						X
ICV	1.0	1515																						X
ICB	1.0	1521																						X
CRI	1.0	1521																						X
CCV	1.0	1521																						X
CCB	1.0	1521																						X
MIDRANGE	1.0	1521																						X
MIDRANGE	1.0	1521																						X
PBW	1.0	1521																						X
PBS	1.0	1521																						X
LCSW	1.0	1528																						X
LCSS	1.0	1528																						X
ME0066	1.0	1531																						X
ME0066D	1.0	1531																						X
ME0066S	1.0	1534																						X
ME0069	1.0	1542																						X
CCV	1.0	1542																						X
CCB	1.0	1542																						X
ME0071	1.0	1542																						X
ME0080	1.0	1542																						X
ME0081	1.0	1542																						X
ME0085	1.0	1542																						X
ME0086	1.0	1542																						X
ME0072	1.0	1542																						X
ME0072D	1.0	1542																						X
ME0072S	1.0	1542																						X
ME0073	1.0	1547																						X

# 13-IN ANALYSIS RUN LOG

Contract: EPW06047

Case No.: 37407

NRAS No.: \_\_\_\_\_

SDG No.: ME0066

Analysis Method: AS

End Date: 05/05/2008ILM05.4

# 13-IN ANALYSIS RUN LOG

Contract: EPW06047

Case No.: 37407

NRAS No.: \_\_\_\_\_

SDG No.: ME0066

### Analysis Method: P

End Date: 05/06/2008

EPA Sample No.	D/F	Time	Analytes																											
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
S0	1.0	0811	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
S	1.0	0813	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ICV	1.0	0819	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ICB	1.0	0822	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CRI	1.0	0825		X	X		X	X		X	X	X		X		X		X		X	X		X	X	X					
ICSA	1.0	0832	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ICSAB	1.0	0834	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCV	1.0	0838	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCB	1.0	0840	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
PBW	1.0	0843	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
LCSW	1.0	0845	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0066	1.0	0852	X	X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X					
ME0066D	1.0	0855	X	X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X					
ME0066L	5.0	0858	X	X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X					
ME0066S	1.0	0901	X	X	X	X	X	X		X	X	X	X	X		X		X		X	X	X	X	X	X					
ME0071	1.0	0904	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0069	1.0	0908	X	X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X					
ME0080	1.0	0911	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0081	1.0	0915	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCV	1.0	0929	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCB	1.0	0931	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0085	1.0	0934	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0086	1.0	0937	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0066	5.0	0944							X										X											
ME0066D	5.0	0948							X										X											
ME0066L	25	0952							X										X											
ME0066S	5.0	0955																												
ME0069	5.0	1005							X										X											
CRI	1.0	1019		X	X		X	X		X	X	X		X		X		X		X	X		X	X	X					
ICSA	1.0	1026	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ICSAB	1.0	1028	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCV	1.0	1039	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
CCB	1.0	1041	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					

# 13-IN ANALYSIS RUN LOG

Contract: EPW06047

SDG No.: ME0066

Analysis Method: P

End Date: 05/06/2008

EPA Sample No.	D/F	Time	Analytes																											
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
PBS	1.0	1103	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
LCSS	1.0	1106	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0072	1.0	1111	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0072D	1.0	1113	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0072L	5.0	1116	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X					
ME0072S	1.0	1118		X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X					
ME0073	1.0	1120	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X					
ME0074	1.0	1124	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X					
ME0075	1.0	1132	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X					
ME0076	1.0	1136	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCV	1.0	1145	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB	1.0	1147	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ME0077	1.0	1150	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ME0078	1.0	1155	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ME0079	1.0	1203	X	X	X	X	X	X		X	X	X	X	X	X			X	X	X	X	X	X	X	X					
ME0082	1.0	1211	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ME0083	1.0	1217	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ME0074	5.0	1229												X	X										X					
ME0075	2.0	1233												X																
CRI	1.0	1236		X	X		X	X		X	X	X		X		X		X		X	X		X	X	X					
ICSA	1.0	1259	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ICSAB	1.0	1301	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCV	1.0	1304	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB	1.0	1306	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ME0079	2.0	1309							X							X														
ZZZZZZ	2.0	1311																												
ME0066A	1.0	1412																		X										
CRI	1.0	1419		X	X		X	X		X	X	X		X		X		X		X	X		X	X	X					
ICSA	1.0	1423	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ICSAB	1.0	1425	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCV	1.0	1427	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB	1.0	1430	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

ESD Central Regional Laboratory  
Data Tracking Form for Contract Samples

Sample Delivery Group: ME0066 CERCLIS No: ILN000509228  
Case No: 37407 Site Name/Location: LAKE CALUMET SMELTING (IL)  
Contractor or EPA Lab: ChemTech Data User: EPA  
No. of Samples: 17(7-W; 10-S) Date Sampled or Date Received: 14 May 08

Have Chain-of-Custody records been received? Yes ☒ No ☐  
Have traffic reports or packing lists been received? Yes ☒ No ☐  
If no, are traffic report or packing list numbers written on the Chain-of-Custody Record?  
Yes ☐ No ☐  
If no, which traffic report or packing list numbers are missing?

Are basic data forms in? Yes ☒ No ☐  
No of samples claimed: 17(7-W; 10-S) No. of samples received: \_\_\_\_\_

Received by: pdavis Date: 14 May 08

Received by LSSS: pdavis Date: 15 May 08

Review started: 5/21/08 Reviewer Signature: Jan

Total time spent on review: 15 + 3.5 6/1/08 Date review completed: 5/22/08

Copied by: A. C. Harvey Date: June 2, 2008

Mailed to user by: pdavis Date: 3 June 08

**DATA USER:**

Please fill in the blanks below and return this form to:  
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: \_\_\_\_\_ Date: \_\_\_\_\_

Data review received by: \_\_\_\_\_ Date: \_\_\_\_\_

Inorganic Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK
Organic Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK
Dioxin data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK
SAS Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input checked="" type="checkbox"/> if OK

**PROBLEMS:** Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Date: \_\_\_\_\_